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ORIGINAL ARTICLES.

THE SURGICAL IMPORTANCE OF JAUNDICE.

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THE early theory regarding the causation of jaundice was that in most cases it was due to some mechanical obstruction. This position which has been proven to be to a great extent erroneous has led surgeons of the past to place altogether too much importance on the presence or absence of this symptom when studying the diseases of the biliary passages. Look at any of the more recent works on general medicine, for instance, Allbutt's System or Pepper's American Text-Book of Medicine, and see the long list of diseases in which jaundice is a symptom, as for example, typhoid, pneumonia, dengue, influenza, cerebrospinal, intermittent, relapsing, typhus and yellow fevers, pyemia, abdominal aneurism, heart disease, leukemia and all the different forms of pancreatitis, peritonitis and hepatitis.

Of course it is very true that the jaundice associated with many of these diseases is, as a rule, of a very different character from that observed in the true obstructive cases. As William Hunter says, "The jaundice is usually less intense in its character from that met with in mechanical obstruction, being frequently evidenced by a slight yellowish or greenish-yellow discoloration of the skin or conjunctivæ, rather than the dull golden yellow or green color of true obstructive jaundice.

The following case is so unusual in this connection that I will give Dr. Solberg's clinical report in full. Mrs. T. R. W., aged thirty-one years, born in this State of Swedish parents, herself mother of two healthy boys. Has always with few exceptions during early childhood enjoyed good health. During the last week of pregnancy she complained of constant itching all over her body and her skin was noticed to be of a muddy hue, but as her general health was good especial attention was not paid to the itching. Labor and puerperium were uneventful except that a sore on one leg, caused by scratching, took on an erysipelatous appearance on the fifth day of her lying-in period, but soon healed kindly under appropriate local treatment. When her baby was a few months old she went away visiting her parents in a neighboring town, where she spent the summer in apparently good health. She returned to her home in St. Paul in September, when the peculiar muddy complexion already mentioned, seemed a good deal more

marked, but as she claimed to be in excellent health and had an abundant supply of milk for her child, no medication seemed necessary.

Later on she consulted me for nightly diarrhea, when I found that symptoms of obstructive catarrh of the bile ducts had developed. Her conjunctivæ and skin were deeply greenish-yellow, some itching, foul-smelling, nightly diarrhea, stools clay or cream-colored, urine very dark, etc., but the general health was excellent, appetite and strength good, mind cheerful. I then commenced to prescribe remedies generally used under such circumstances and she continued to take them for a long time, but without apparent benefit. She continued to nurse her baby and appeared to feel perfectly well, except for her nightly diarrhea. Suddenly one day, when the baby was about eleven months old, she was seized with severe pain in the hypochondriac region extending down somewhat into the right lumbar region. This was diagnosed as biliary colic and controlled by hypodermics of morphine. I also gave directions that stools be examined carefully for calculi. As pain continued without intermission, except when controlled by morphine, for a number of days, and some fulness and great tenderness developed in the regions mentioned, with a temperature ranging between 100° and 103° F. and no stones could be found in the feces, I deemed a consultation necessary. Drs. P. Ritchie and A. MacLaren saw the case with me, and both concurred in the diagnosis of obstructive jaundice and thought that, if she did not improve in a few days, an operation would be imperative. No improvement taking place she was removed to Bethesda Hospital for operation. She was then deeply jaundiced, and had been so continuously for eight months or more; the stools were clay-colored; the urine was very dark, and there was continued pain in the right hypochondrium and lumbar region; also some emaciation.

Mrs. W. was operated on April 9, 1897. An incision was made in the right semilunar line and a perfectly normal biliary system demonstrated. No inflammatory thickening or adhesions, no obstruction. An inflammatory mass, however, was palpated in the right loin continuous with the lower end of the right kidney. An incision in the back over the crest of the ilium opened a large appendicial abscess. Every touch of the knife was followed by excessive hemorrhage as is often the case in chronic jaundice. Mrs. W. lived only a few hours after the operation, dying from the shock of hemorrhage and acute sepsis. A post-mortem was made by Dr. Solberg and myself, when a post-cecal appendicial ab-

scuss was demonstrated, drained into the incision in the back. There was absolutely no disease of the liver or the biliary passages found. The bile was normal in quantity and quality and there was no obstruction in the ducts, or inflammation of the mucous membrane lining the biliary passages. This case is quite unique, no similar case being reported that I have been able to find in quite an extended and fairly thorough study of the literature.

Since this paper was prepared a case of marked jaundice of considerable duration was reported by Groose of Sioux Falls, South Dakota, as having been observed by him when he was a resident of Mercy Hospital, Chicago, several years ago, where an appendicial abscess was found at the time of operation. The cause of all these forms of jaundice is still an unsettled question, but is probably due to the influence of septic germs which are circulating in the blood and in the lymph in these cases.

Dr. Henry G. Graham, in an article just published in the *New York Medical Journal*, entitled "Microbes—What are They?" gives the result of his experiments which go to prove that the protozoa, which are frequently found in the fluids of the body and can readily be seen with the naked eye, are the hosts from which under proper conditions are developed living microscopic subdivisions or buds which, when stained, give every evidence of being streptococci, staphylococci, and perhaps tubercle bacilli. If this proves to be true what a wide field for research this opens up in the study of disease and its causation, of which our small subject is a very infinitesimal part.

But to return to jaundice; Hunter further says, when speaking of toxemic jaundice, as, for example, infectious jaundice, icterus gravis and Weil's disease, "In a number of these cases, indeed organisms of varying character have been described as occurring in the liver, there is hardly any reason to doubt the microbic origin of toxemia jaundice." Dr. George Adami, of Montreal, in his very interesting and scholarly article on latent infection and subinfection, has proven that many of the forms of chronic inflammation, such as are found in cirrhosis of the liver, in hemochromatosis and probably in pernicious anemia, are due to the presence of bacteria which were being taken up and more or less perfectly killed by the tissues, but at the expense of their own vitality. He says, "As a consequence of chronic inflammatory disturbance in connection with the gastrointestinal tract, there may for long periods pass in through the walls of the stomach or of the intestine a greater number of ordinary bacteria inhabiting the tract, and, while the bacteria undergo the normal and inevitable destruction by the cells of the lymph-glands, the liver, the kidney, and the other organs, the excessive action of these cells and the effect on them of the bacterial toxins, liberated in the process of destruction, may eventually lead to grave

changes in these cells and in the organs of which they are a part—changes of a chronic nature.

Adami quotes Dr. Fütterer of Chicago, as follows: "He was able to gain the bacillus prodigiosus from the pelvis of the kidney two minutes after injection into the jugular vein of the dog, while, inoculating animals with the pyococcus aureus and the bacillus prodigiosus, and following Biedel and Kraus he collected the bile from a cannula inserted in the common duct and gained abundant culture of these micro-organisms from the bile within two or three minutes after inoculation into the left side of the heart. Thus, I am led to conclude that where the number is not too great, the liver tissue is capable of wholly destroying and digesting the bacteria. Where, however, this function of the liver-cells becomes exhausted by the taking up of excessive numbers of the bacteria, it is possible for the bacteria to be discharged or secreted into the bile in a still living state." Adami further says, "These observations appear to me to clearly demonstrate that, while one of the functions of the lymphatic glands is to take up and destroy bacteria circulating in the lymph, a function of the liver, both as regards its endothelium and its cells, is to take up and destroy such bacteria as are introduced by leucocytes into the venules of the portal system and gain entrance into the portal blood, while similarly a function of the kidney parenchyma, more especially of the convoluted tubules, is to remove bacteria circulating in the systemic circulation."

These conclusions are of especial interest in studying the causation of cholecystitis and the microbic origin of gall-stones. Last winter I presented to the Minnesota Academy of Medicine a paper on the relationship between cholecystitis and gall-stones, in which I contended that in the great majority of cases cholecystitis was the disease and the stones only products or symptoms of the disease. The bile is an excellent culture medium and cultures of the colon bacillus and the ordinary pus germs, but particularly the bacillus typhosus, have been found by many observers in the gall-bladder of persons suffering from typhoid—in other cases years after a typhoid attack, and a few times in cases that had never had the disease; and Cushing of Johns Hopkins reports that on two occasions he has artificially produced gall-stones by injection of the culture into the gall-bladder of animals. Of course, the inflammation may extend from the intestine, but probably the great majority come from the blood in the manner that Adami has pointed out.

But to return to the infectious nature of jaundice, in the *Zeitschrift für klinische Medizin*, Band 36, three cases of pneumonia are reported in which icterus had been present and in which the colon bacillus was found in the bile. While in other cases that had no icterus the bile was sterile. Of course, the liver is the cesspool or filter of the body and has the power of filtering

out or killing infectious germs which are circulating through the blood incased in its leucocytes. At times under a sudden strain, or depending on the number or intense virulence of the germs or of the poison produced by the germs, the liver-cells probably become swollen and temporarily compress the finer biliary channels and thus produce more or less well-marked attack of jaundice. Whether this theory is correct or not this mild jaundice is of no practical surgical importance, except perhaps to attract our attention to the liver and gall-bladder. Aside from its being of no positive value as a symptom, it is not even a negative sign, for many cases where extensive disease of the biliary passages, such as exist with every case of cholecystitis with and without gall-stones, have been shown to exist for months and years without a sign of jaundice at any time in their course.

Mayo Robinson reports 167 cases of cholecystotomy in which he found gall-stones present 140 times; in 100 of these cases no jaundice had been present at any time during the course of the disease, and in most of the cases where it had been present it was only very slight in amount or present during but two or three of the attacks of colic.

During the past year I have performed 13 operations upon the gall-bladder and bile-ducts; two of these were exploratory in character and no disease was found; in one, adhesions existed between the gall-bladder and the pylorus. The remaining 10 all showed gall-stones in greater or less number, and all of these, with one exception, showed evidence of cholecystitis, yet in not one of them had jaundice ever been present at any time during the course of the disease. Several of these patients had had the disease for several years, having suffered many attacks which were supposed to be due to the passage of gall-stones.

Mild and transient attacks of jaundice occasionally accompany cholecystitis and catarrhal inflammation of the bile-passages by the obstruction produced by plugs of mucus, although I think that such a result is rare. Fagge thinks that catarrh of the bile-ducts never gives rise to enough swelling of the mucous membrane to produce jaundice. If such a result is ever produced it would be most likely to occur, accompanying a catarrhal inflammation of the duodenum, by obstructing the common duct where it passes obliquely through the intestinal wall to discharge at the ampulla of Vater.

A more pronounced form of jaundice is seen in connection with Weil's disease in acute yellow atrophy and with abscess of the liver. In the first of these the jaundice is the most striking symptom of the disease. It usually shows itself about the second or third day of the disease. It rapidly increases until the patient is quite yellow at the end of twenty-four hours. It lasts about fourteen days and disappears slowly. In acute yellow atrophy of the liver the jaundice

does not last quite as long, but is usually quite intense in character. In abscess of the liver the jaundice is as a rule not well marked, but this is only one of the times in which there is any indication for surgery, unless the first be complicated, as it sometimes is, by cholecystitis. In abscess of the liver the indication, as in any other abscess, is to reach and drain the abscess cavity. When superficial, and if adhesions have been found, this is a very easy matter. But in deep abscesses, or if the abscess is on the superior surface of the liver, so that it is necessary to reach it through the pleural cavity, it is often a very difficult and dangerous procedure. These abscesses, if neglected, have at times a deep and a superficial cavity connected by a small and usually a tortuous channel. If the deep cavity is not reached, you may not relieve your patient. I remember opening a large superficial abscess of the back, several years ago, in a very sick man, who died a few days after the operation. A post-mortem demonstrated just such an abscess, very imperfectly drained, in the center of the liver.

When we come to well-marked and persistent jaundice, the great majority of these cases we find to be suffering from carcinoma of the liver. This is a very common disease. Between the years 1885 and 1893, inclusive, 4200 autopsies were performed at Guy's Hospital, and in 3 per cent. of this number either primary or secondary carcinoma of the liver was found.

W. Hale White, in speaking of this subject, says, "About half the patients who during life present symptoms of carcinoma of the liver are jaundiced; and this nearly always means that enlarged carcinomatous glands in the transverse fissure are pressing on the common bile-duct. But in some cases the pressure is due to the primary growth, especially if it be in the head of the pancreas; and occasionally enough of the hepatic ducts in the liver may be compressed by nodules of new growth for jaundice to appear. Or there may be primary cancer of the bile-ducts. It is extremely important to bear in mind that by far the most frequent cause of long-standing jaundice is cancer of the liver, which always produces deeper jaundice than any other common disease; thus, patients suffering from cancer present in the most extreme form those symptoms which are due to circulation of bile in the blood and its absence from the intestines. The jaundice, too, is permanent; the only exceptions to this rule are those excessively rare cases in which, although the patient has cancer of the liver, the jaundice is due to a gall-stone in the common duct, which is either passed on or slips back. The skin, deeply and slowly stained by bile, gradually becomes more and more green and ultimately assumes a peculiar earthy, dark-green tint, which, especially if the patient is aged and wasted, is almost diagnostic of cancer of the liver. The other effects of bile in the blood are also evident; the urine is very dark and has a

yellowish froth, the numerous scratch-marks show the intense pruritus. The bitter taste in the mouth is very unpleasant, the sweat may be bile-stained, and if, as often happens from secondary deposits in the lungs, the patient gets bronchitis or pneumonia, the expectoration may be yellow. There are few things more characteristic in medicine than to see an aged, gray-haired patient extremely wasted, with dry, dark-green skin hanging in loose folds, lying perfectly still, so drowsy that he is more dead than alive. If we turn down the bedclothes the liver may be seen deforming the shape of the abdomen, and it will be noticed that the sheets are stained yellow by urine or sweat. The absence of bile from the intestine causes indigestion and constipation, and the motions are pale, smell horribly, and contain much undigested fat."

The surgery of cancer of the liver is very unsatisfactory. The disease is, in my experience, very aggravated and the end is hastened by even an exploratory operation. Cholecystotomy and drainage give relief except in cancer of the common duct. Cancer of the gall-bladder, which is almost always found in cases when gall-stones have existed for years, should be removed if the liver be not too extensively infiltrated.

One of the more intense forms of jaundice is found in connection with stone in the common duct. Fenger and Osler have both described the ball-valve-like action of such stones, which accounts for the intermittent jaundice which usually accompanies this condition. The presence of a stone in the common duct, either floating or impacted, almost always produces cholangitis or infective catarrhal inflammation of the bile-ducts. Robeson describes it as follows: "The usual history is one of spasms for several years without jaundice; then comes a more severe seizure followed by temporary icterus. If the gall-stone pass, there is an end of the trouble; if not, the next attack of pain is probably followed at once by a shiver and by all the symptoms of an "ague fit," the temperature frequently reaching 104° or 105° F. After it passes off the skin is deeply tinged and the jaundice may persist, although inconstant in degree; it rarely, however, disappears completely between the attacks; there is usually a slight icteric tinge of the conjunctivæ, even though the interval between the attacks may be one of weeks or of months. The rigors may be repeated daily or at irregular intervals."

My conclusions, therefore, are: (1) That slight attacks of jaundice are of comparatively little surgical importance, and that the majority of surgical disease of the biliary passages have no jaundice at all. (2) That persistent jaundice especially if progressive is usually a contraindication. (3) While on the other hand intermittent, deep jaundice, especially if associated with chills and a rise in temperature, denotes a stone in the common duct which urgently demands removal.

THE HYGIENIC TREATMENT OF TUBERCULOSIS.¹

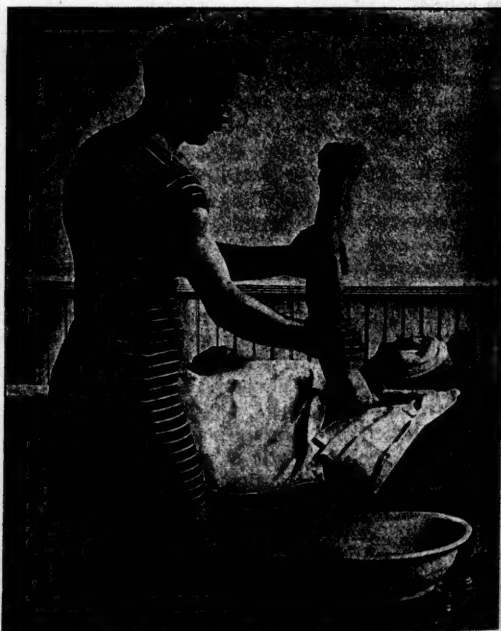
By J. H. KELLOGG, M.D.,
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(Continued from page 732.)

In the employment of general cold applications in cases of pulmonary tuberculosis it is necessary to observe with care certain precautions.

1. A tonic cold application should never be made when the surface is cold, when a chill is impending or when the patient feels chilly, nor when the temperature is high.

2. Cold applications should not be made to the entire surface at the same instant until the patient has been trained by carefully graduated partial cold applications, in which the whole surface is gone over by applications to small territories in succession. The danger of pulmonary congestion from retrostasis is thus avoided. This is especially necessary in cases in which there is a hemorrhagic tendency. When the application is made to small areas in succession, as in the wet hand-rubbing (Fig. 5), cold mitten-friction (Fig. 1), cold towel-rub (Figs. 6, 7, 8), reaction is produced in each part before proceeding to the next.



WET HAND RUB

Fig. 5.

Thus the general retrostasis is avoided and pulmonary congestion is not produced.

3. The intensity, duration and frequency of applications must be accurately adapted not only to the patient's ability to react, but to his power

¹ Read before the American Climatological Association, Washington, D. C.

to digest and assimilate, the aim being to stimulate constructive metabolism more than destructive change. A loss of weight indicates the necessity for rest from exercise and diminished intensity, duration or frequency of the cold application.

4. In applications for the lowering of temperature, all the antithermic measures such as are used in typhoid fever and other infectious fevers, as the Brand bath, the cooling pack, cannot be safely employed because of the intense internal congestion produced by these measures and for the further reason that the resistance of the body and its heat-making capacity are greatly reduced, so that only mild measures are tolerated. The neutral bath, wet hand-rub, wet towel-rub, administered carefully, and at temperatures ranging from 85 to 92° F., are best suited to the purpose. The cooling head-compress and the cold abdominal and the cool chest-compress are also useful as a means of producing fever.

5. Great care should be taken to avoid producing prolonged chill at any time, and especially in the beginning, measures which produce retrostasis by causing contraction of the blood-vessels of the entire cutaneous surface are not well tol-



COLD WET TOWEL RUB TO CHEST.

Fig. 6.

erated except in the incipient stages of the disease.

6. The patient's weight, general strength, appetite and temperature are matters which should be carefully studied in relation to the treatment. An increased loss of weight indicates the neces-

sity for rest and decrease in the intensity, duration or frequency of the treatment. Loss of appetite and of strength indicate the necessity for the adoption of the same measures. Fever inter-



COLD WET TOWEL RUB TO ARM.

Fig. 7.

dicts short cold applications and requires the application of prolonged tepid measures.

7. An aggravation of any of the patient's symptoms indicates a necessity for the modification of the treatment. A proper management of hydropathic treatment secures very prompt or almost immediate alleviation of symptoms. A contrary result should be accepted as evidence for the necessity of a change.

8. By the employment of these general principles, we may confidently expect to secure some degree of alleviation of all the symptoms even in the worst cases; in the average case, great improvement and a lengthening of life amounting to many months and sometimes several years; and in favorable cases, suppression of the fever and the night-sweats, improvement in appetite and weight, and decided gradual lessening and final disappearance of the cough and expectoration, restoration of strength and general vigor and, finally, disappearance of the bacilli and complete suppression of all symptoms.

The patient should continue the treatment in a modified way after the disappearance of all the symptoms not only for a few weeks but for months, even years. In fact, the habitual employment of the daily cold bath may be regarded

as one of the best of all safeguards for persons who have been cured of the disease by hydropathic measures. After having made use of most of the above described measures for the last twenty-five years and in a large number of cases, I feel



COLD WET TOWEL RUB TO FEET.

Fig. 8.

no hesitation in saying that they are capable of accomplishing more for the radical cure of tuberculosis than any or all other known measures.

Symptomatic Measures.—While the various distressing and threatening symptoms present in this disease are for the most part relieved by the general treatment here outlined, special applications of various sorts render great service. The general symptoms for which the above treatment acts almost as a panacea, are anemia, nervous and muscular weakness and emaciation. The relaxation and unhealthy condition of the skin likewise rapidly disappears under the powerful vasomotor gymnastics of cold-water applications. Various localized and special measures are needed to meet particular conditions and symptoms. The following measures recommended for special conditions have all been tested and proven valuable in the hands of the writer and his colleagues in dealing with the conditions for which they are commended.

Cough.—The chest-pack at night (Figs. 9-12). Sipping hot water when the paroxysm is threatened, in cases in which the cough is due to irritation in the throat. If hard coughing is due to the viscosity of the secretion, copious drinking of warm or hot water will afford relief. When the cough is exceedingly troublesome, the chest-pack should be worn during the day as well as at night. The chest should be rubbed well, first, with the hand dipped in water at 50° F., then with the dry hand, before the pack is applied. In cases in which emphysema exists, with cavities in which secretions accumulate to the detriment of the patient, the cough being too weak to expel the secretion, the expulsive efforts of the

lungs may be reinforced by slapping the chest with the hand or towel dipped in ice-water just before applying the pack. These measures should not be applied if there is danger of hemoptysis.

Through the nervous and vascular relations of the skin with the internal viscera it is possible by means of thermic applications to the surface of the body to exercise almost complete control over the general movement of blood in the body and local blood-supply as regards both volume and rate of movement of blood. Every internal viscus is represented from the surface of the body by an area with which it is in reflex relation through the vasomotor centers. The cutaneous areas related to the lungs comprise the skin covering the chest, especially the anterior portion of the chest, the shoulders, the anterior lower surface of the neck, the arms, especially the palms of the hands. Applications to this surface produce effects differing according to the temperature, duration, and mode of procedure. A short cold application produces contraction of the bronchial vessels, which is followed after the withdrawal of the application by dilatation with increased activity of the bronchial vessels and in-



ROLLER CHEST PACK. (First Step.)

Fig. 9.

creased movement of the blood through the lungs. Prolonged cold applications produce prolonged contraction of the bronchial vessels provided the sensibility of the cutaneous nerves is maintained by occasional short applications, by rubbing with warm dry flannels, by the removal at frequent in-

tervals of the cold application long enough to allow reaction to occur, or by allowing the cold compress to become slightly warm before removal.

A heating compress, that is a cold compress well covered and allowed to accumulate heat until it attains the ordinary temperature of the skin or a little more, causes first a brief contraction of the bronchial arteries, followed by a dilatation and increased activity of the nutritive vessels of the lungs with diversion of blood into the intercostal veins, thus facilitating the movement of blood through the lungs and diminishing passive congestion and encouraging leucocytosis. Short hot applications to the chest-wall divert blood from the bronchial vessels into the collateral vessels—the internal mammary and the intercostals.

By alternate hot and cold compresses, a sort of pumping action may be operated upon the lungs. The cold application contracts the small vessels, thus emptying the tissues, while the succeeding hot application instantly dilates the vessels, admitting a new supply of blood, which by the succeeding cold application is forced onward into the venous circulation. The effect of a hot application can be renewed as often and as long as desired by brief cold applications at intervals of ten or fifteen minutes. The effect of cold applications may likewise be prolonged by brief applications of heat at short intervals.

The chest-compress not only combats the irritation and passive congestion to which the cough and expectoration are due, but lowers temperature and by increasing the movement of healthy blood through the parts improves the nutrition of local cells, removes and neutralizes the toxins by which their resistance is lowered or destroyed and especially encourages leucocytosis, the most effective means by which the body can combat the bacillus.

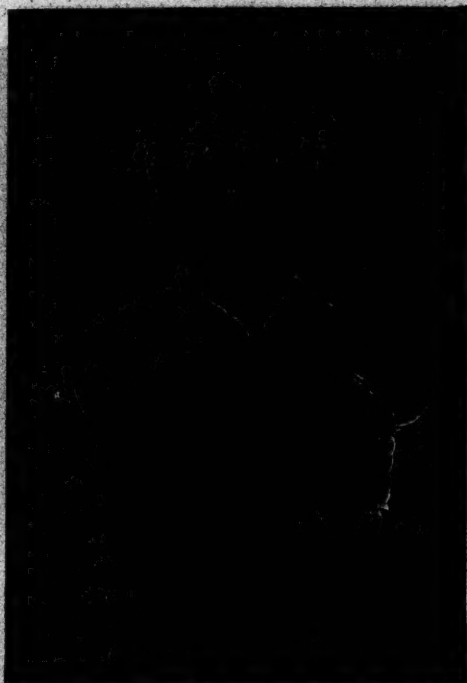
The effect of the chest-pack in relieving the cough is often magical. Patients who have been almost entirely deprived of rest by a troublesome night cough are often at once so relieved that abundance of refreshing sleep is obtained by the simple application of the chest-pack at bedtime. In cases in which the circulation is feeble the wet towel should be covered with oiled muslin, mackintosh or gutta-percha tissue, in addition to the flannel wrappings. Either the roller or the square chest-pack (Figs. 13-16) will be found convenient for use in cases of this sort.

Expectoration.—When expectoration is scanty, copious water-drinking is advantageous by increasing the secretion of the pulmonary mucous membrane. The viscid secretion is so diluted that it may be easily expelled. The chest-pack diminishes excessive secretion by relieving congestion, at the same time relieving irritation and resulting cough when expectoration is not present.

Pain.—Short fomentations followed by the heating compress are the best means of relieving pain. Pleuritic pain sometimes requires the application of a tight bandage about the lower part of the chest. If necessary, hydiatric applica-

tions may be applied over the outside of the bandage. Fomentations applied to the chest should be short, not more than five to eight minutes, and as hot as can be borne. The heating compress should be prepared with very cold water, should be wrung very dry, and should be instantly applied when the hot compress is removed.

Hemorrhage.—This grave symptom is not, of course, always easily controlled. Even hydiatric applications sometimes fail because of the large size of the ruptured vessels giving rise to the hemorrhage. The best measures are hot applications to the lower extremities, as the hot leg-pack, cold compresses applied to the chest, con-

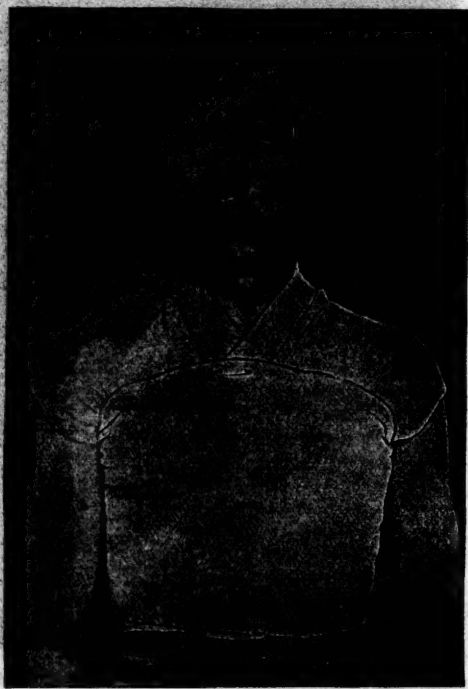


ROLLER CHEST PACK. (Cheese Cloth in Place.)

Fig. 10.

sisting of a folded towel or six or eight thicknesses of cheese-cloth. Very hot applications applied to the cervical spine, covering especially the vertebræ prominens. Solly has called attention to the fact that atropine, if used in sufficiently large doses (1/50 of a grain), sometimes renders service in checking hemoptysis by lowering blood-pressure. Blood-pressure may be lowered to almost any degree desired by the hot blanket-pack and by vigorous friction of the skin. By these means the blood-vessels may be dilated to such a degree as to contain nearly two-thirds of all the blood in the body. In the application of friction the rubbing should be outward from the heart, or following the distribution of the arteries, so as to lessen the movement of the blood toward the heart and the chest. Reflex

contraction of the pulmonary vessels may be induced by ice to the hand and over the neck. Care must be taken to keep the arms warm so as to favor hyperemia of these parts and collateral anæmia of the lung. No part of the surface, with the exception of the chest-wall, should be allowed to become chilled. It is often better to apply a fomentation to the whole back to relieve the bronchial arteries by diverting blood into the intercostals while, at the same time, contracting the vessels of the lung by cold applications to the front chest, preferably a cheese-cloth compress wrung out of ice-water and renewed every minute. If the application is long continued, the skin should be rubbed with dry, warm flannel at intervals of five to ten minutes to maintain cu-



ROLLER CHEST PACK COMPLETED. (Front View.)

Fig. 11.

taneous sensibility which is essential for the stimulation of the vasomotor centers.

Dyspnea.—Paroxysms of dyspnea are best relieved by short, hot applications to the spine, the hot foot- or leg-bath and the hot leg-pack. Hot sponging of the chest and spine are excellent measures. When due to disordered digestion, fomentation over the stomach should be administered. A warm enema when constipation exists. A fomentation to the spine with cold bag or compress over the stomach is useful in dyspnea due to distention with gas.

Irritation of the Throat.—This condition, which appears in its most aggravated form in cases of laryngeal tuberculosis, requires the throat-pack, which may be worn night and day.

Hot-steam inhalations are sometimes of service, but generally fail in tuberculous laryngitis.

Chill.—This symptom requires rest in bed, wrapping in blankets, hot bottles to the sides and feet, hot-water drinking. The hour at which the chill arrives having been ascertained, the patient should be ordered to bed half an hour or an hour before the time at which the chill is expected to occur. Rubber-bags filled with hot water or hot bottles should be placed at the sides and feet. He should be wrapped in warm blankets, and, if necessary, a dry pack should be administered in the ordinary way. The occurrence of slight perspiration will do no harm, provided it is not induced too rapidly. Great care should be taken to avoid subsequent chilling after perspiration has occurred. If the intensity of the chill be lessened, the reactionary fever will be less intense.

Fever.—When elevation of temperature is a marked symptom, the neutral bath may be employed with advantage and with perfect safety at a temperature of 92° to 95° F. for an hour. The best time for the bath is half an hour to an hour before the time at which the temperature usually reaches its greatest intensity. By this means the febrile process may be controlled and as the application is renewed from day to day, the febrile movement may be found to yield more readily. The chest-pack also assists greatly in reducing temperature. When the temperature of the patient rises at night to 101° F. or more the compress should be lightly wrung in the application of the chest-pack. Thus, considerable antipyretic effect may be secured. Free water-drinking aids temperature reduction by eliminating the bacterial toxins to which the temperature elevation is due.

Night-Sweats.—Profuse perspiration is but the natural cooling off of the fever. Suppression of chills and fever is quickly followed by this appearance of the night-sweats. Sponging the whole cutaneous surface with water as hot as can be borne just at bedtime is an excellent means of lessening the cutaneous activity and securing comfortable sleep.

Cardiac Disorders.—More or less cardiac disturbance is likely to occur in tuberculosis as a result of the great diminution of the respiratory area. Hypertrophy or dilatation of the right heart is frequent from this cause. Excessive action of the heart should be controlled by rest in bed, and the application of the ice-bag over the heart, or the cold precordial compress. The application may be continuous in severe cases; in other cases the compress should be applied every other hour. Short applications of the cold precordial compress are equally valuable in cases of cardiac weakness shown by feeble, frequent pulse, cyanosis, and laborious respiration. The duration of the application should be from fifteen to twenty minutes twice a day. Later the time may be extended to forty minutes or even one hour, forenoon and afternoon. There is no agent which exercises more powerful control over the heart than the cold precordial compress.

It acts with greater promptness and certainty than digitalis or any other so-called heart tonic. Short applications slightly energize the heart; prolonged applications exercise an equally marked sedative influence.

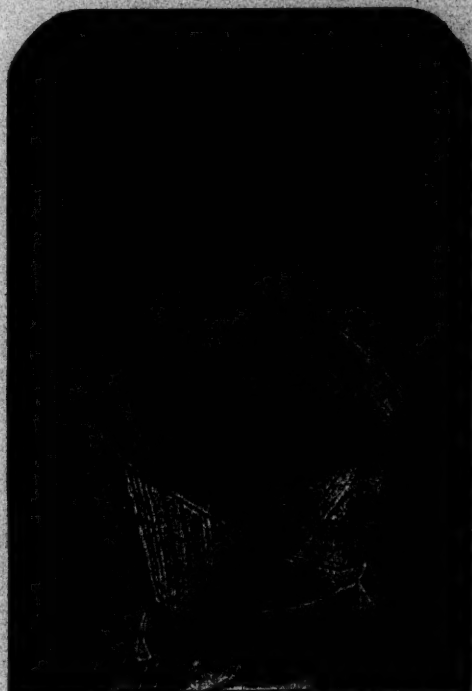
Digestive Disturbances.—These are generally of the atonic variety. The stomach is dilated in a large proportion of cases of pulmonary tuberculosis. In fact there is no doubt that digestive disorders, with resulting failure of nutrition, lay the foundation for the disease in a great majority of cases. The futility of stomachics and so-called digestive stimulants of various sorts, which are commonly used in tuberculosis, has been well shown by Skeritt.¹ This observer found by post-mortem examination that the activity of the pancreatic extract in consumptives was diminished fifty per cent. The diastatic examination of the saliva in living consumptives showed depreciation of the salivary secretion to the same degree. These observations agree with those of the writer as to the condition of the saliva in tuberculosis. Its activity is almost invariably diminished. This fact accounts, without doubt, in large measure for the emaciation of consumptives and their inability to digest starchy foods and fats. Digested foods are required and the application of such measures as will improve the metabolic activity of the secreting glands.

The most useful foods are such as have been subjected to the preliminary digestion of the starch, either by means of heat or by vegetable diastase. Malt is useful as a food rather than as a digestive agent. It should be taken freely to the extent of several ounces daily. Maltose is easily converted into levulose, the form in which sugar enters the blood. Starch in the form of mushes and starchy vegetables is digested very slowly while it ferments and sours easily. Starch converted into achroodextrine by exposure to temperature sufficiently high to brown it slightly, is, next to maltose, the most assimilable of foods. Toast and zwieback and roasted or browned rice are excellent examples of well-cooked farinaceous foods. Sweet fruits are still better, presenting sugar in the form of glucose already for absorption and assimilation. Grapes and grape-juice are especially rich in glucose, also sweet apples, figs and most other sweet fruits. Malted milk and cream, malted nuts and various malt and heat-digested cereals are useful in these cases as fat-producers.

Cold water is the most valuable of all remedies for this purpose. The general cold bath promotes glandular activity in all parts of the body, and it promotes the activity of the peptic glands, as has been clearly shown by examination of the gastric fluid, and by its general restorative effects promotes all the metabolic processes. The application of the ice-bag over the stomach for half an hour before eating increases the digestive power of the stomach as shown by the increase of appetite. The CO₂ compress is still more ef-

fective as a peptic promoter. The prolonged application of the hot compress after eating is as active in promoting digestion as the ice-bag before the meal. A quarter of a glass of ice-cold carbonated water may be taken half an hour before the meal with advantage. These measures are infinitely superior to any medicinal remedies which can be administered in promoting the appetite and digestion. Predigested foods should be used in conjunction with the measures suggested.

Vomiting.—This symptom is generally the result of violent coughing. A dry dietary, eaten slowly while lying down, is best. The patient should recline half an hour before eating in order



ROLLER CHEST PACK COMPLETED. (Back View.)

Fig. 12.

that the breathing may become tranquil and the food should be eaten very slowly to avoid hurried respiration. When cough is excited reflexly by irritation of the sympathetic, the hot and cold trunk-pack or the hot chest- and trunk-pack, or both combined if necessary, should be applied half an hour before food is taken, and the duration of the compress should be two hours, or at least an hour, after the completion of the meal, the patient remaining in the meantime in a horizontal position. In mild cases a compress extending from the umbilicus to the clavicle applied half an hour before eating will be found sufficiently quieting to the sympathetic centers to prevent both cough and vomiting. A hot and cold trunk-pack consists of a towel wet

¹ Year-Book of Treatment, 1894.

in cold water, wrung dry, and wrapped around the trunk, a hot bag over the stomach, and a warm, dry, folded blanket tightly enveloping the whole. The hot and cold chest-pack is applied in the same way, only the hot application is made to the back instead of to the front of the chest.

Diarrhea.—When due to tuberculous lesions of the intestines or mesenteric glands little more can be expected than moderate mitigation of the condition. If considerable pain is present, very hot fomentations should be applied for fifteen minutes once a day. This should be followed by the heating compress to be worn night and day, changed once in four hours. The hot enema is sometimes useful.

In conjunction with hydropathic treatment, massage, carefully graduated and prescribed exercise, manual Swedish movements, Swedish gymnastics, out-of-door life, and climatic change, may be expected to accomplish all that can be done in the curative treatment of pulmonary tuberculosis. If some assistance may be obtained from the local use of antiseptics and the administration of creosote and other measures, the chief reliance must be placed upon the powerful physiological measures which have been outlined, and which experience has proven to be capable of accomplishing results which are truly marvelous when compared with the results ordinarily obtained in this most unpromising class of cases.

Winternitz reports the cure of a large percentage of the cases which have come under his care at his institution at Kaltenleutgeben, the charming suburb of Vienna. Dr. Riley, Superintendent of the Colorado Sanitarium, of Boulder, Colo., has reported a series of fifty-one cases of recovery, all of which were treated by hydropathic methods combined with rational hygienic care and the excellent climatic advantages of the Rocky Mountain region, at an altitude of about 5000 feet. At the Guadalajara Sanitarium, Guadalajara, Mexico, most excellent results have been obtained by the same means. Scores of persons are to-day leading useful lives as the result of the employment of these rational measures at the institutions named, who would have unquestionably been buried long ago without the treatment administered.

Of the 240 cases treated within the last three years at Boulder Sanitarium 160 have been cured or very greatly and more or less permanently improved. A large proportion of the remaining 80 have been temporarily helped to a marked degree, even though the disease was far advanced. It is very rare indeed that patients who are subjected to the treatment outlined in this paper do not very quickly show signs of improvement in increased appetite, lessened fever, lessened night-sweats, and gain in flesh. Patients not infrequently gain at the rate of two to three pounds a week for several weeks in succession. The cough is lessened, strength as well as weight improves, and not infrequently the patient finds himself at the end of a few months looking as well and as free from pain

and discomfort as ever in his life. Slight dyspnea is often the only symptom which remains behind. The permanence of this symptom being the natural result of the lessening of the respiratory area occasioned by the pathological processes characteristic of the disease.

It is my firm belief that the general adoption of hydropathic measures in the treatment of pulmonary tuberculosis by the profession at large, and especially the application of these measures to the disease in its incipient stages, would result in saving at least nine-tenths of the sufferers from this disease from the untimely death to which almost every one is doomed under ordinary medical management.

[To be concluded.]

PERNICIOUS ANEMIA: REPORT OF A CASE.

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IN 1855 Addison in his well-known paper on "Disease of the Suprarenal Capsules" first brought to the attention of the medical profession the disease idiopathic or pernicious anemia, speaking of it as follows: "For a long period I had from time to time met with a very remarkable form of general anæmia, occurring without any discoverable cause whatever—cases in which there had been no previous loss of blood, no exhausting diarrhoea, no chlorosis, no purpura, no renal, splenic, miasmatic, glandular, strumous or malignant disease."

Biermer in 1868 discussed at length the pathology of the affection, and Wilks, Lebert, Channing, and Gusserow have all made additions to the literature on the subject. Fortunately it is a comparatively rare disease, for in spite of study and investigation by both clinician and pathologist the cause has to the present time remained in obscurity.

Geographically, progressive pernicious anemia is widely distributed. At one time it was thought to be especially frequent in the Cantons of Switzerland owing undoubtedly to the fact of its being confused with the other serious anemias.

Etiology.—This is very obscure, there being no known or appreciable cause. As yet it is impossible to say whether the disease is produced by a defective hemogenesis or hemolytic process. A number of authorities among whom are Stephen Mackenzie and F. P. Henry believe that there is a fault somewhere in the process of blood-making and that from this deficiency the red corpuscles become especially prone to changes and degeneration. In spite of all theories the etiology is as yet extremely unsatisfactory, and it will only be by patient and careful study and investigation both ante- and post-mortem that the cause of the disease will be disclosed. That there is a continuous, uninterrupted and constant change in the blood is well

known, but we are still in the dark as to the reason for these changes.

Morbid Anatomy.—There is pallor of the entire surface, also the lemon-green tint in the skin. Sometimes, and usually, there is extreme emaciation; at other times, but comparatively little loss of the subcutaneous fat; the former condition being due, I believe, to the long duration of the disease, while the latter occurs in cases running a rapid course. The liver and spleen are enlarged, the heart muscles of a pale color, lungs normal and stomach normal, excepting perhaps a slight fatty degenerative change. Other lesions have been described, but none of them are constant, such as changes in the sympathetic ganglion (Queckett) and sclerosis of the posterior columns of the cord (Lichtheim).

Symptoms.—An individual who has apparently been in perfect health gradually develops symptoms which seem at first to be those of a simple anemia. The onset of pernicious anemia is sometimes sudden but more frequently very gradual, and the patient is often unable to give the exact time of the beginning of his illness. The skin slowly becomes pale, gradually assuming the lemon-green tint characteristic of the disease, and is most marked at first on the face, after slowly extending over the entire surface of the body. There is a very perceptible weakness, and marked dyspnea on exertion due to the heart's action being very rapid. Vertigo and headache and ringing in the ears are often though not always present. Numbness of fingers and toes is one of the first indications. The organs of digestion gradually become disturbed, there is enlargement and engorgement of both the liver and spleen, edema of the extremities and, toward the end of the disease, as a rule, extreme emaciation. The finale is described as follows by Addison: "The debility becomes extreme, the patient can no longer rise from bed, the mind occasionally wanders; he falls into a half-torpid and prostrate state and at length expires; nevertheless and to the very last and after a sickness of several months' duration, the bulkiness of the general frame and the amount of obesity sometimes present a most striking contrast to the weakness and exhaustion observable in every other respect."

The Blood.—In the blood we must look for a certain confirmation of the diagnosis of pernicious anemia. Oligocythemia is always present as a principal feature and is as a rule very extreme. The relation between the percentage of hemoglobin and number of red corpuscles is disproportionate, the corpuscles being greatly decreased in number, while the hemoglobin remains comparatively stationary. The red corpuscles fall to about one to two million per cmm., and often lower, while the hemoglobin ranges from 18 to 40 per cent. A fresh blood slide shows numerous macrocytes. These are a constant feature of the disease and it is possible

that in cases where there is a high percentage of hemoglobin it is due to the excessive number of the large red corpuscles. In addition to these are found numerous microcytes or dwarfed red corpuscles and also those having irregular form, *vis.*, poikilocytes. Ehrlich has shown that two varieties are constantly present: (1) Normoblasts about the size of an ordinary red corpuscle, containing a nucleus which stains deeply and is situated eccentrically in the cell; (2) very large forms or megoblasts with large faintly stained nuclei. There are, as a rule, but comparatively slight changes in the leucocytes.

In the early stages there is marked dyspnea which increases as the disease progresses, and is due probably to the inability of the blood to carry oxygen. The pulse is small and rapid; murmurs are heard in the cardiac region. Hemorrhages into the skin and mucous membranes occur occasionally. The lips and tongue are pale and there is nausea and vomiting of more or less frequency and severity. Constipation is usually extreme and requires enemata. The urine shows no important changes. The specific gravity is low and the urea and uric acid somewhat increased.

Diagnosis.—The points on which to base a diagnosis are as follows, and in every suspected case include an examination of the blood. (1) Greenish-yellow tint of the skin. (2) Dyspnea and rapid pulse without pulmonary symptoms and a proportionate rise of temperature. (3) The intense oligocythemia. (4) The presence of macrocytes and microcytes. (5) The steady and uninterrupted progress of the disease toward a fatal termination and the inefficiency of treatment.

Prognosis.—This is always unfavorable. The course of the disease is steadily toward a fatal ending. Cases have been reported to be cured, but I am inclined to believe they are cases which have merely had an intermission and have then disappeared from the attendant's observation, or else there has been an error in diagnosis. My own opinion is that cases of true pernicious anemia do not recover.

Treatment.—Arsenic is the only drug which seems to have a beneficial effect in these cases, and then, although it does, it is only slight and not permanent and only temporarily checks the progress of the disease. Fowler's solution in increasing doses to the tolerance of the individual; arsenious acid used in the same manner is the best form of the drug for these cases. Complete rest in bed; light and nutritious diet; light massage for insomnia; digitalin and strychnine for weak heart's action; oxygen inhalations for the dyspnea. Bone-marrow is sometimes of temporary benefit, and in using this latter I think the preferable way to give it is to spread a certain quantity of marrow, freshly scraped from bones, on a thin slice of toast. I believe this to be better than the preparations of marrow found on the market. Transfusion of blood has been tried

but, like all other forms of treatment, is of only temporary benefit.

Fortunately cases of pernicious anemia are rare. A case which came under my observation during the summer of 1899 was of twofold interest, first, because my patient was an intimate friend and, secondly, because it was the first case I had ever seen. The history is as follows: G. K., aged forty-nine years, American, medium height and weight. Latter part of June, 1899, came to, my office complaining of general malaise, temperature 99.5° F.; pulse 100; on walking or making any exertion the latter increased to 140 or 150; appetite poor, bowels irregular; skin on face showed slight change in color resembling that produced by jaundice. As he had had one or two such attacks about a year previously, although not so severe, I advised him to give up business and take a complete rest in the country, together with tonics and a nourishing diet. I saw him again at the summer resort where he was staying about one week later. He had gained about one and a half pounds in weight, but his general appearance and condition were worse than when he left home; the slightest exertion caused palpitation and extreme dyspnea. The discoloration of the skin had assumed more of a greenish tinge and was extending over the shoulders and arms. The appetite was poor; bowels torpid and liver somewhat enlarged. He also had slight hemorrhage from the rectum. I advised his return to Buffalo where he came during the first part of July.

I was now convinced I had an extremely serious case to deal with and was undecided as to whether it was a malignant growth, Addison's disease, or pernicious anemia.

The patient attended to his business for a day or two and after this was confined to his house and to his bed the greater part of the time until his death. Before the blood examination was made he was seen in consultation by Dr. C. R. Jewett, and at that time malignant disease was eliminated and it was left to the blood examination to determine between Addison's disease and progressive pernicious anemia. The blood examination was made by Dr. H. G. Matzinger and showed 2,500,000 red corpuscles and 35 per cent. of hemoglobin. There was extreme poikilocytosis, a failure in the piling up formation of the red corpuscles and numbers of macrocytes.

This showed positively that the case was one of pernicious anemia. Perfect rest was at once directed and a plain and nutritious diet ordered together with increasing doses of arsenic beginning with grain 1/30 t. i. d., also tonics and stimulants. The bowels were kept regular by means of enemata and cathartics. Two weeks after a second examination of the blood was made showing an increase in the percentage of hemoglobin, but a decrease in the number of red corpuscles, also the same conditions of degeneration and lack of efforts at normal repair. During this period all kinds of unfavorable and uncomfortable symptoms arose; extreme hyper-

esthesia of the surface of the body, marked distention of the bowels from gas and consequent colic. There was loss of appetite, nausea and vomiting, obstinate constipation and insomnia. About this time my patient was seen by Drs. John Parmenter and D. W. Harrington and in addition to the treatment already instituted bone-marrow was ordered. At this period the emaciation became very marked. The diagnostic lemon-tint of the skin extended over nearly the entire body; there was constant edema of the hands and feet and all the former symptoms were greatly exaggerated.

Examination of the blood made by Dr. C. S. Jewett on the dates mentioned shows distinctly the steady progress of the disease. August 14th: Red cells 937,500, hemoglobin 37 per cent.; August 26th: red cells 765,000, hemoglobin 25 per cent.; September 10th: red cells 595,530, hemoglobin 25 per cent. From this point the progress of the disease was rapid and it was necessary to resort to the hypodermic use of morphine two or three times a day. At no time during the course of the disease were there important changes or abnormal conditions present in the urine. An examination of the blood on November 1st showed a further diminution in the number of corpuscles and in the percentage of hemoglobin. Death occurred November 14th. No post-mortem was made.

In presenting this paper the point I wish to emphasize is this: In cases of apparent chlorosis and primary anemia in which there is present the greenish tint of the skin, together with dyspnea, palpitation, and general malaise, one should not depend on symptoms for the diagnosis, but should let the blood examination decide whether one is dealing with either of these diseases or with a case of pernicious anemia.

BIBLIOGRAPHY.

- Jakuch & Cagney. Clinical Diagnosis, p. 42.
 Progressive Medicine, June, 1899, p. 79.
 Loomis. Principles and Practice, p. 68.
 Allen. Practitioner's Manual, pp. 26-28.
 Tyson. Practice of Medicine, p. 58.
 Hare. System of Practical Therapeutics, vol. II, p. 76.
 Gould. Year-Book of Medicine and Surgery, 1899, pp. 707 and 731.
 Pepper. Theory and Practice of Medicine, vol. II, p. 301.
 Osler. Practice of Medicine, p. 689.

SOME OBSERVATIONS ON AFFECTIONS OF THE GALL-BLADDER.¹

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THAT the surgery of the gall-bladder including gall-stones has received too little attention at the hands of the medical writer until recently, no one will deny. From a purely surgical standpoint the subject has never before been brought to the notice of this society. A. W. Mayo Robson² advances the proposition that "as soon as gall-stones give serious trouble their removal

¹ Read before the West Virginia State Medical Society, Morgantown.

² Robson, Diseases of the Gall-Bladder and Bile-Ducts, first ed. preface.

by operation is the most rational method of treatment. It is one that can be safely supported, since it is only from the complications, which in many cases of cholelithiasis arise sooner or later, that any danger after operation need be apprehended.

The following cases have come under my observation during the past year and a half:

Case I.—Choledochotomy; removal of one large stone by crushing; suture of the ductus communis, drainage, recovery. Gained thirty pounds in three months.

Mrs. M., Woodsfield, Ohio, aged thirty-six years, was admitted to the City Hospital, referred to me by Dr. J. R. Parry, February 1, 1899. A sister suffered with epilepsy, otherwise antecedent history good. No previous morbid personal history. She married, at the age of twenty-four, and has had three children, normal confinements, and one miscarriage. Present illness began about three years ago with what she describes as "a bilious attack," constipation, nausea, vomiting and epigastric pain. The cramps lasted several hours, but her recovery was complete apparently. Since that time she has had several attacks, each one a little more severe than the preceding one. She never noticed any icterus until she was six months pregnant with her last child, which was born eight months before her admission to the hospital. At this time she had an attack of cramp-like pain, for the most part localized under the right costal border, radiating toward the epigastrium and back under the right shoulder-blade. The icterus was slight, but the pain was severe. Since the birth of her child she has not been well, suffering with a constant soreness under the ribs on the right, has lost flesh and strength, her food did not agree with her and the appetite was poor. Her stools have had a gray appearance, and the color of her skin was sallow. The pain varied in intensity, and it often required an opiate, and when very severe she was compelled to go to bed for several days at a time, and at these times her icterus was deeper and the urine a dark brown.

On admission, the patient was poorly nourished and anemic. The skin and sclerotics were slightly icteric, and her stools were the color of lead and decidedly hard. Heart showed an anemic blowing murmur in the third left space. Urine 1018, no albumin, sugar or casts, acid in reaction, and bile pigment abundant. Blood contains 71 per cent. hemoglobin. Palpation reveals very marked tenderness over the gall-bladder, and a slight sense of resistance, but no tumor. This patient was given three weeks of preliminary treatment. She was placed on a peptonate of iron with arsenious acid after her meals. A heaping teaspoonful of the natural Carlsbad Sprudel salt in eight ounces of water a half-hour before her breakfast; in addition to this she succeeded in disposing of from four to five pints of hot distilled water daily. She was given daily a hot bath and massage treatment.

Her general condition improved and she was in good condition for operation by February 21st.

Operation.—Under ether narcosis an oblique incision, about five inches in length, was made parallel to and about two inches below the free border of the ribs on the right. The incisure between the right and the anterior lobe of the liver was felt for and found, and the resistance felt on palpation before opening the abdomen was found to be a mass of dense adhesions overlying the gall-bladder. These were ligated and cut and after some blunt dissection an atrophied gall-bladder was exposed. The peritoneal cavity was walled off by large gauze compresses and the gall-bladder opened. It bled freely, was very thick, and contained about an ounce of very dark viscid bile and some granular detritus. Exploration of the interior of the gall-bladder led me to think that the lumen of the cystic duct was obliterated, but later I succeeded in passing my finger down through the cystic duct some distance, and then with the help of Fenger's probe located the offending stone well within the foramen of Winslow. The cystic duct was so contracted that it was impossible to dislodge or even map out the territory about the stone. The blunt dissection was most carefully continued outside of the bile-passages so that with strong light and good retraction the common duct was exposed and incised immediately above the stone, which had been partially crushed between the thumb and finger. Through this incision Fenger's scoop was passed and the crushed particles of a large gall-stone removed. The fragments weighed 83 grains.

With a fine needle and fine iron-dyed silk five stitches were used in closing the incised duct. A large rubber drainage-tube was inserted into the open gall-bladder and a small tube carried down to the neighborhood of the repaired duct. Some strips of sterile gauze were placed in the wound along the tubes, the gall-bladder sewed to the parietal peritoneum and aponeurosis and the wound closed. The tube was placed in a four-ounce bottle with its end immersed in an inch of twenty-per-cent. carbolic solution, and this bottle was pinned to the outer dressing. The small tube was removed in twenty-four hours, the larger one was left *in situ* for eight days, draining and syphoning large quantities of bile.

The wound healed primarily, the site of the drainage tube granulating, so that by March 26th there was not any leakage. The patient was discharged cured April 1st. In three months she gained forty pounds. She became pregnant one month after leaving the hospital, and in January of this year gave birth to a healthy boy without incident. She is now well.

Case II.—Cholecystectomy, with removal of ten large stones; choledochotomy one large stone removed. Recovery.

Mrs. J. W. H., of Marshall County, West Virginia, aged forty years, married and the mother of six children. Admitted to the City Hospital May 7, 1899, by her family physician, Dr. H. T.

Ford. There was no morbid family history. Her previous health had been good before the onset of her gall-bladder trouble. For the last eleven years she has suffered periodically with what she calls "pleurisy attacks," pain referred to the right side, and extending backward beneath the shoulder-blade, occasionally radiating upward into the right shoulder and axilla. These attacks would come as often as once in three or four months for the first six or seven years, the longest interval having been nine months, while carrying one of her children. She never coughed or expectorated, and was never jaundiced. For the past year she has suffered more than in the previous nine years. The attacks have become more frequent, so that she has been incapacitated for doing her household duties, has been obliged to resort to opiates for the relief of her pain, and has lost flesh and strength.

November 6, 1898, or about five months before admission to the hospital, she was seized with a chill, followed by a high fever and an attack of very sharp pain over the gall-bladder, radiating toward the stomach and posteriorly beneath the right scapula. This pain was not relieved entirely by a grain of morphine, but continued the following day and gradually diminished, leaving the patient much prostrated and decidedly jaundiced.

In the five months she lost over forty-five pounds and has suffered periodically with intense pain. She was never entirely free from soreness, her icterus gradually deepened, and her life was a burden to herself and a source of constant solicitude to her friends.

On admission the patient weighed 138 pounds; the skin was a deep bronze color, mucous membranes and sclerotics a decided yellow; pulse 110, afternoon temperature 100° to 101° F.; tongue furred and heavily coated; urine the color of strong coffee; microscopically negative; specific gravity 1021, acid in reaction, with a trace of albumin. Stool clay-colored and hard. Area of hepatic dulness increased, a very decided resistance beneath the ninth rib on the right and exquisite tenderness, rectus muscle rigid and abdomen somewhat distended. Patient was the picture of despair and the lines of her face showed too well her five months of intense suffering.

Operation.—April 8th, ether narcosis. An incision six inches in length was made parallel to the right costal margin. Adhesions were everywhere present. The general cavity of the peritoneum was well protected by large crash compresses. The gall-bladder was nowhere to be seen. The groove where it might be expected was well to the right so that after double ligation and division of many vascular bands the edge of the liver, yellow and rough, was identified and retracted upward with difficulty. After some little time was consumed in blunt dissection of part of the omentum and stomach-wall from the under surface of the liver, the thickened, elongated gall-bladder could be felt well

embedded in the under-surface of the substance of the liver. On incision there escaped a mucopurulent and bile-stained fluid and with it ten stones were removed.

Exploration demonstrated that the gall-bladder was nothing more than a blind pouch having no communication whatever with the cystic duct, nor could one be made, as the cystic duct was found to be obliterated for about three-quarters of an inch beyond this blind sac. The gall-bladder was removed. I felt confident that the operation thus far had not removed the obstruction. Blunt dissection was carried downward with the aid of a portable incandescent lamp and Allis' blunt dissector. Palpation of the hepaticoduodenal ligament revealed a hard mass in the common duct. After the identification of the vein and artery as far as it was possible, an incision was made in what seemed to be the point of junction of the cystic and common ducts. Fenger's spoon was inserted and the stone removed. The common duct was found dilated at this point, yet the stone seemed anchored in some way, for it was removed with difficulty. A tube of moderate caliber was inserted into the incised duct and the closure of the wound was in every way similar to Case I. In less than twelve hours the bile poured out copiously, saturating the very ample dressing, binder and bed-linen. The tube was removed on the sixth day, and by the end of the third week no bile stain was observable at the sinus. Patient was discharged cured June 10th. She weighed 186 pounds in February of this year, contrasted with 138 pounds on admission to the hospital the previous May.

Case III.—Cholecystotomy; choledochotomy, removal of a friable stone, morphine habitué, cholemic secondary hemorrhage, death.

Mrs. E. S., aged thirty-eight years, married. Mother died of Bright's disease, had been operated on for floating kidney. While pregnant with her first child, a boy four years old, she suffered with the vomiting of pregnancy and three months before the birth of her baby had her first attack of biliary colic. The pain continued and was sufficient to demand the daily use of morphine. It seemed to reappear paroxysmally for more than three weeks. The hepatic colic, working in its sequelæ upon a constitution already infirm and impoverished, left behind a nervous adynamia, and it was for the relief of this condition and the soreness about the gall-passages that the morphine was unfortunately continued. The habit fastened itself upon her, although the patient vainly endeavored to fix a daily allowance, but it was always with considerable leeway for emergencies, as in almost all like cases. Her hypodermic syringe became her *vade mecum*. Constipation, early confirmed, grew to be an annoying symptom. Insomnia, interrupted by a fitful sleep precluded any real refreshing. Her stomach developed that peculiar sense of gnawing described by De Quincy, as if produced from the presence of a reptile. Her paroxysms of

pain became more and more frequent, and her icterus deepened to a bronze. It was in this condition that she was admitted to the City Hospital in December, 1899, where she undertook a treatment for her morphine habit. I saw her for the first time January 16, 1900, and found the epigastrium and region of the gall-bladder very sensitive on palpation, but no tumor could be felt. On account of the sharp attacks of hepatic colic and the profound cholemia, I advised immediate operation.

Operation.—January 17th, under ether and chloroform narcosis a transverse incision was made. The structures seemed unduly vascular. The peritoneum was very much thickened and inflamed. The liver was very much enlarged and had a fatty, mottled appearance, as though the seat of cirrhosis. Some adhesions were separated and the gall-bladder was exposed. It was distended and pale in appearance. After guarding the cavity of the peritoneum, a cholecystotomy was done, and immediately there gushed out a large quantity of milky fluid containing no bile pigment. It came from the bile-duct, for the quantity was far in excess of the gall-bladder's capacity.

Courvoisier¹ found in literature ten cases of hydrops of the biliary ducts, which were filled with a watery, colorless, or slightly mucoid fluid which did not possess any of the characteristics of bile. In these ten cases the entire system of the biliary tract was filled with a hydropic fluid of this nature. In not one of the ten cases was the obstruction due to stone, but to tumors within or outside of the common duct, or to obliteration of the duct in one case. He explains the acholia by assuming that cessation of the secretions of bile may, under certain circumstances, be caused by high pressure on the liver-cells, due to the stagnation of bile behind the obstruction. In this case and in one reported by Fenger the acholia was partial and was caused by a stone, and this phenomenon seems to be remarkable, as Fenger's case and the one under consideration are the only two known to me which have been reported.

The common duct was exposed and incised, and with the aid of the spoon several large fragments of stone were brought into view. The common duct was widely distended and there was no evidence of bile pigment in its wall. Further search and probing was rewarded by finding more of the friable fragments of the gall-stone. There was some troublesome bleeding from the surface of the liver, where an adhesion had been separated. This was promptly arrested, as well as the bleeding from all other adhesions, a tube inserted into the opening in the dilated common duct, and the gall-bladder sewed to the parietal peritoneum. Strips of gauze were passed down along the side of the tube, a large absorbent dressing applied and the patient removed from the table. Time of operation, two hours.

During the first twenty-four hours following the operation a quart of pure bile escaped through the tube, and from this time on there was a most copious secretion. The pulse at the end of twenty-four hours was 104, temperature and respiration normal. A grain of morphine was given the first night to allay the pain. The nurse was instructed to give a half-grain of morphine when the occasion required, but strange as it may seem the patient did not ask for the opiate after the end of the second day.

In the two weeks preceding the operation she had suffered with two attacks of fainting while in bed. One of the attacks had followed an injection of some gold preparation which she had been taking under the direction of another physician, but whether or not they were the result of the hypodermic injections, I am not prepared to say. They were characterized by a quick, irregular heart-action, sighing respiration, and would pass off in less than an hour, leaving the patient rather prostrated for the rest of the day. Three days after the operation, January 20th, she was seized with such an attack. She lay for an hour in a cold clammy sweat with the eyes partly closed, pulse ran up to 120, temperature subnormal, and extremities cold. The wound was dressed and the strips of gauze removed, and only a very little dark blood could be seen on the bile-stained strips. Otherwise the wound looked perfectly healthy. This condition of shock was combated with dry heat and stimulation, and she reacted kindly. The supposition was that the syncopal seizure was similar to those which she had experienced prior to the operation. The stomach retained nourishment, and the bowels moved freely and much flatus was passed in response to enemata. The fecal matter contained some bile, and the urine was losing its coffee color. There was some very slight tympanitic distention, yet the vermicular contractions of the bowels could always be heard on auscultation.

January 21st and 22d, the bile continued to flow freely and the icterus seemed to be clearing. The pulse varied from 96 to 120. The skin felt natural except when she was threatened with one of the fainting spells. The area of hepatic dulness appreciably diminished, and at intervals on the 19th, 20th and 21st, she seemed well and bright and planned much for the future. She had no pain and required no morphine, yet, when one of the sinking spells came on, she presented the appearance of a patient in great shock.

Early on the morning of the 23d she was very restless, asked frequently for water and ice, and at times would vomit the clear water, which was slightly bile-stained, without much effort. Several times during the day she asked for morphine, and each time a quarter of a grain seemed to satisfy her. About three o'clock in the afternoon she was seized with one of the syncopal attacks, and while every effort was made to arouse the weary heart, she grew steadily worse and died at nine o'clock in the evening.

¹ Fenger. *Am. Jour. Med. Sci.*, Feb., 1896, p. 147.

Autopsy.—A post-mortem examination of the abdominal contents was made. The stitches were removed and the site of the operation exposed to view. There had evidently been a progressive secondary hemorrhage, as large quantities of clotted blood were found between the diaphragm and the liver, and extending beneath the liver and posteriorly as far back as the spine, but not entering the peritoneal cavity. The wound was clean and the intestines were not even congested. There was no sign of peritonitis. The hepatic abrasion spoken of was clean and there was not any clotted blood about it. The region of the incised gall-bladder and bile-ducts in through the foramen of Winslow was not stained and it was demonstrated that no considerable bleeding had come from the immediate field of operation. For the most part it seemed to have been a general oozing; perhaps more came from the denuded surfaces where adhesions had been broken and separated, yet no one place or vessel was responsible for the large amount of blood which was found. It should be remembered that every adhesion of any size at the time of the operation received proper attention, and before closing the wound more care than usual was observed in searching for bleeding vessels.

While this patient had never presented any of the symptoms which might have placed her in the category with those of the hemorrhagic diathesis, unless it was that she flowed excessively at the time of her menstruation, this diathesis is well known in icterus gravis and is also found in the icterus resulting from gall-stones. Dr. Fenger speaks of it as a grave complication, and Courvoisier found it in fifty-eight patients, in most of whom operation was not performed and in whom the hemorrhage was severe and often fatal. He collected reports of six cases in which hemorrhage from the wound of operation in the gall-bladder had a fatal termination. "He warns us," says Fenger, "to search the history of the patient and make careful examination all over the body in order to ascertain whether or not a predisposition to hemorrhage exists, either from the mucous membrane or in the subcutaneous tissues; and in case the patient presents the symptoms to abstain from operation, which is likely to prove fatal on account of the uncontrollable hemorrhage from the wound of operation or from other organs. In some cases, however, in which no symptom of hemorrhage preexisted the operation has been followed by fatal hemorrhage, not from the operation wound, but from other portions of the body. It seems almost as if the operation brings into active existence a latent hemorrhagic condition."

Merman reports that Czerny lost seven patients out of forty-three upon whom he operated for diseases of the biliary tracts. Three of the seven deaths were caused by cholemic secondary hemorrhage, which in one case occurred from the intestines, entirely independent of the wound of operation.

Case IV.—Gall-stones; cholemia, ulceration

and perforation of the common duct; no operation; septic peritonitis; death.

Dr. A. L. Hupp of Cherry Camp, West Virginia, one of the most brilliant and highly respected members our State Society has ever produced, died at his Harrison County home June 16, 1899. It was my sad privilege to be present in consultation with Dr. Louchery, the day before he died. Dr. Louchery has kindly written the following letter regarding the case:

"I was called to see Dr. Hupp May 29, 1899; he had been suffering for four or five days with spasmodic colicky pains in the region of the gall-bladder and thought he had passed about three gall-stones, and later did pass three or four small stones. He was very much jaundiced and suffered at intervals from nausea. He had administered to himself hypodermically from one-half to one grain or even one and one-half grains of morphine a day to relieve the pain. Diagnosis of impacted gall-stones was made. At times there was a remission of pain, so that we hoped he was improving. Stools were pasty, whitish and clay-colored; no appetite, tongue furrowed whitish, made yellow by vomited matter. Every day or two he appeared to relapse into a more serious and depressed condition, and finally died, suffering the most excruciating agony, on June 16, 1899. He vomited toward the last with the persistency of intestinal obstruction. There was active delirium and his condition was septic.

"The Doctor had had some four or five similar attacks, the first immediately succeeding the meeting of our State Medical Society in Wheeling in 1896. Another attack the next winter succeeding a very severe siege of typhoid fever during the summer and fall of 1893. In fact, he had been an invalid ever since the attack of typhoid fever. The treatment relied upon chiefly was pure olive oil and sulphate of soda, but they were without effect utterly. The very strange part was that so intelligent a physician could so persistently have refused the aid of the surgeon until moribund."

Case V.—Gall-stones, ulceration and perforation of the common duct; shock and septic peritonitis; no operation; death.

Mrs. S. W., aged seventy-eight years; healthy antecedents, mother of five children. Sixteen years ago she had some symptoms of obstructions of the bowels, the description of the attack answering very well that of fecal impaction. She had suffered from constipation, indigestion and colic for years, and had experienced occasionally some pain and soreness in the right hypochondrium. She had frequent attacks of vomiting throughout the winter, lasting part of a day and always attended with some pain in the right side, but she did not even speak of this to the members of her family, not wishing to annoy them. She has been very active of late years and enjoyed very good health. She was seen by her physician, Dr. E. C. Meyers, April 15th, sitting up in a chair suffering from what she called indigestion and colic. She thought little of the

attack, but confessed that it was worse than it had ever been before. The pain over the gall-bladder interfered with her breathing, and was not relieved until morphine was injected. An examination by Dr. Meyers showed some resistance under the ribs on the right side, and there was some slight distention of the bowels, nausea and vomiting. April 17th at night she was seized with very sharp pain in the epigastrium and in less than an hour exhibited symptoms of shock and collapse. Morphine and cardiac stimulation tided her through the night, but her physician made a grave prognosis, watching at her bedside through the night and feeling that her advanced age and the marked evidence of shock precluded the possibility of any surgical interference. I saw her the following morning in consultation. The patient was icteric, with a distended abdomen, temperature 103.5° F., pulse 136, small and thready, and vomiting. So great was the distention that nothing diagnostic could be made out in the right hypochondrium. It was evident that there was a peritonitis and that the patient was fast approaching a moribund condition. She died that night.

Autopsy.—A ruptured common duct was found and two friable stones loose in the peritoneal cavity near the seat of rupture. No effort had been made on the part of Nature to wall off the large quantity of seropurulent bile-stained exudate. The gall-bladder contained thirty or forty small, black, crenated stones, each about the size of a French pea and not faceted. The intestines were markedly distended and were covered with some recent catarrhal exudate.

Case VI.—Ulcerative perforation of one of the bile-ducts; symptoms of peritonitis; no operation; recovery.

James McK., aged twenty-nine years, carpenter. No morbid family history. No previous morbid personal history. About ten years ago he had an attack of indigestion about every five or six weeks which incapacitated him for a day or so. They were characterized by colicky pain in the epigastrium, radiating to the right, nausea and vomiting. No icterus. He had been living in the oil fields for the last five years where the food is not always what it should be. He had no further trouble until about a year ago, when there was some return of the old attacks. During the last ten months he had four or five rather severe attacks of pain, always localized over the stomach, lasting about a day and leaving him sore for several days. There was some icterus noticed at these times. April 24th of this year he awoke in the morning with an attack of indigestion and pain in the right side. As the day wore on the pain became more severe, and he called his physician, Dr. E. A. Hill, of Wolf's Summit, Harrison County. He continued ill all day Wednesday and in the evening about nine o'clock he was seized with violent, lancinating pain in the right side extending up into the right arm and shoulder. His pulse was rapid and his temperature was 102° F. Hypodermic injections

of morphine relieved the pain, but only temporarily. He was seen by Dr. Louchery in consultation with Dr. Hill Thursday morning, April 26th, and at this time in addition to the other symptoms there was some distention of the abdomen, vomiting and constipation.

The patient was brought to Wheeling on a stretcher and admitted to the City Hospital where I saw him, with Dr. Hill, Friday morning, April 27th. At that time his pulse was 110, temperature 99.5° F. He seemed to be suffering acutely from general abdominal pain with its point of maximum tenderness over the region of the liver. The abdomen was distended and the right rectus muscle was rigid. There seemed to be an effusion or a sense of resistance over the gall-bladder. There was also noted a want of symmetry in the two sides of the chest along the axillary line and over the liver. Over this fulness there was marked tenderness on palpation. Percussion yielded a dull note high up into the axilla on the right. An occasional moist râle and a suspicion of bronchial breathing could be heard over this area. He coughed and expectorated a rusty mucopurulent sputum. The acute tenderness and extreme distention of the abdomen made a positive diagnosis entirely out of the question. His treatment consisted in the application of a pneumonia jacket, whiskey, strychnine, and peptonized milk. A high enema given at ten o'clock in the morning was not effective.

I did not feel justified in suggesting surgical interference without more light in the direction of a positive diagnosis. For there seemed to be as many indications at that time favoring beginning hepatic abscess as there were toward perforative ulceration of the gall-passages. In the evening his pulse was 140, respirations 32, temperature 102° F., and he complained of feeling chilly, but distinct rigors did not occur. Another effort at moving the bowels was rewarded by the patient passing a perfect storm of flatus and a large quantity of soft lead-colored feces. By morning the pulse was 120 and of better quality, temperature 99.5° F., and breathing less frequent. Monday morning, April 30th, the tympanitis had subsided in large measure. The pulse was 108 and the general aspect of the patient improved. Tuesday the distention had almost entirely disappeared, bowels were moving freely, pulse 90 to 96, temperature normal, and respiration 20 to the minute. The rectus muscle was still rigid, but a mass about the size of a hen's egg could be felt over the gall-bladder, which was tender on deep pressure. May 8th he sat up out of bed for the first time. His icterus began to clear up, and his convalescence was assured.

There seems to be little doubt as to the diagnosis in this case: An ulceration with leakage of one of the bile-passages, causing a local peritonitis, with a complicating pulmonary congestion—perhaps some pneumonia. I feel satisfied that had he been subjected to an operation at the

time when it seemed most needed, the day following his admission to the hospital, the case would have terminated fatally.

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MEDICAL PROGRESS.

Clinical and Bacteriological Diphtheria.—Dr. Winters in the discussion on diphtheria, at the New York Academy of Medicine, said that 104 cases of diphtheria on a hospital staff was a record-breaking number. Henoch in his text-book on children's diseases says that diphtheria is not contagious for adults except under special circumstances. He distinctly states that during thirteen years and a half of his service in the children's department at Berlin, where there were constantly diphtheria patients in the wards, not a single nurse or doctor contracted the disease. Trousseau, whose experience with diphtheria was very large, says in his text-book that diphtheria is very rare in hospital servants. It is, therefore, extremely surprising to find over 100 cases occurring within a few years in the service of a hospital in Boston. The reason for this surprising morbidity, one cannot help but think, is due to the difference between clinical and bacteriological diphtheria. When bacteriological diagnosis came in the number of cases of diphtheria rose very markedly in a very short time. In the Boston City Hospital less than 1100 cases of diphtheria were admitted in four years before the days of bacteriological diagnosis. Recently there have been 1900 cases in a little less than 13 months. Physicians are counseled against the use of large doses of antitoxin. At the Willard Parker Hospital in New York observers have thought they have noticed an increase of mortality as the dosage of serum was increased. Even the most enthusiastic advocates of the serum treatment do not claim that any better results were obtained with large doses than with comparatively small ones. Although it is being insisted more and more that the question of the curative effect of antitoxin is absolutely settled, as a matter of fact there still remains reasonable doubt in this matter.

Dr. W. H. Bergh of New York said that their experience with large doses of serum at the Willard Parker Hospital had not been very favorable. The mortality was not reduced and many more cases of skin eruption occurred than after the smaller doses. Moreover, there was a marked tendency to more frequent occurrence of bronchopneumonia. It must be remembered that the lungs are emunctory organs, as well as respiratory organs. The effort to excrete some of the principles contained in the heterogeneous serum of the horse seems to lower their vital resistance. If, as in Boston, 50,000 or more cc. of serum are injected, 250 cc. of heterogeneous se-

rum must be disposed of by the system. This involves too much labor for the emunctories of the body.

Dr. Rupp said that to the general practitioner diphtheria antitoxin has proved a great disappointment. Personally, he has given up its use except in such cases as those in which parents urged by a mistaken public opinion in the matter insist on the use of antitoxin. In one such recent case a series of the most painful complications ensued after an injection of diphtheria antitoxin.

Etiology and Treatment of Asthma.—On account of the absence of discoverable pathological lesions, sufficient to cause the well-marked symptoms of asthma, there have consequently been a large number of reasonable and fantastic theories advanced in regard to the etiology of this disease. W. A. Wells (*N. Y. Med. Jour.*, Oct. 13 and Oct. 20, 1900), after passing in review the several factors which are ordinarily advanced as influencing, at least, the asthmatic attacks, suggests that by reason of the spectacular paroxysmal crises which occur in asthma, provoked as they sometimes are by peculiar and apparently trivial causes and disappearing in an equally unaccountable way, there must be some well-marked psychical factor, and he is further inclined to believe that epilepsy, migraine and angina pectoris possess a number of points in common with asthma. Haig and Schlemmer have strongly urged the uric-acid causation of asthma, on account of the increase of that excretory product in the urine during the attacks. The phenomena, however, cannot be explained on a physical basis alone, the emotional centers, no doubt, playing an important part. In considering the treatment of the paroxysms fumigations give great relief. A good formula is:

℞ Pulv. stramonii.....
Pulv. belladon. fol...aa. 25.0 (℥j)
Pulv. potassii nitrat.... 6.0 (℥j)
Pulv. opii 1.0 (gr. xv)

Pyridine, a volatile coal-tar product, when employed by inhaling ten or fifteen drops put upon a handkerchief, gives almost instantaneous relief. Another recent remedy highly praised by the French is iodide of ethyl. Morphine and atropine are perhaps the most reliable drugs for this disease. An organic cause must always be looked for, several cases having been found to be induced by irritation of the vagus resulting from pressure upon it by an enlarged thyroid. More frequent and rather common causes are throat and nose lesions, and these must always be sought for. A valuable prescription which is used during the intervals of attacks is:

℞ Ammon. ioidid..... 6.0 (℥j)
Ammon. bromid..... 8.0 (℥ss)
Syr. tolut..... 60.0 (℥ij)
Tinct. lobelia.....ad. 100.0 (℥iij)

Dose, one teaspoonful.

On account of the uric acid diathesis the author has used piperazine in a large number of cases

of asthma and believes it to be exceedingly effective in warding off this affection when given in doses of one gram per day in the form of piperazine water.

Herpes Zoster and Acne Rosacea.—Herpes zoster is an acute inflammatory disease of the skin, running its course in about three weeks and characterized by severe neuralgic pains which frequently subside on the appearance of the vesicles, but may persist for some time afterward. A. Memelsdorf in a clinical lecture upon this disease and acne rosacea (*Med. Standard*, Oct., 1900) says that a central or peripheral traumatism, infiltration of a ganglion or a nerve by a neoplasm, inflammation or any other irritation in any part of the tract from the cord to the periphery of the nerve may evoke a zoster eruption. Kaposi distinguished eight varieties according to the location of the lesion. Since it is a self-limited disease, it is only necessary to treat the symptoms as they arise. Morphine hypodermically may be necessary and phenacetin internally is useful. The best local application is flexible collodion with or without morphine. This markedly alleviates the pain and frequently prevents the rupture of the vesicles, which may result in the formation of ulcers. Acne rosacea is supposed to depend largely upon the use of alcoholic stimulation, but the effect of alcohol has never been positively proven, the real cause of the disorder being probably the accompanying gastric catarrh. Exposure to excessive heat and cold may cause rosacea. In treating this condition it is important that attention must be given to any constitutional or local disturbance. The seborrhea and desquamation must be removed by green soap and water. A ten-per-cent. ointment of sulphur is then applied at bedtime, removed next morning and a soothing application (ten-per-cent. boric acid) rubbed into the face. Lassar's paste may be spread upon the face and left for fifteen minutes, when it is removed and a dusting powder added. The paste may be applied four successive nights. This causes an inflammation and desquamation of the skin, and a bland ointment may then be necessary. Scarification and massage may also be used. Heitzman recommends the following: Calcis 3ss, sublimated sulphur 5j, water 5x. Boil down to six ounces and filter. After the face has been thoroughly cleaned and comedones opened, this solution, in a strength of one to ten of water, is used once a day for the first week. The dilution is gradually reduced to one to five. During the day a ten-per-cent. boric acid ointment may be employed.

Lignosulfit in Tuberculosis.—Of all remedies employed in tuberculosis, those which directly reach the alveoli give the most promising results, and lignosulfit, in the opinion of R. Simon (*Therap. Monatschft.*, Oct., 1900), ranks most highly of these. It is a mixture of sulphurous acid with the aromatic ingredients of fir, dissolved to form a brown fluid. A ten-per-cent.

aqueous solution is allowed to saturate the air of a room in which the patients must remain one to two hours daily. Improvement soon manifests itself by a change in the physical signs over the lungs and by a gradual disappearance of the annoying symptoms. As a valuable adjunct to the treatment, pulmonary exercises are mentioned; these are especially good when the acuteness of the attack has subsided and the patient is well on the road to recovery.

Amyloform.—For an antiseptic to be generally valuable it must possess rapid and permanent antimycotic properties; it must be easily miscible with oil and glycerine and its physical properties should permit its use as powder and as ointment. Cipriani (*Monatschft. f. prakt. Dermatolog.*, Oct. 15, 1900) is well pleased with the results he obtained with amyloform, a combination of starch with formalin, and prefers it to all similar drugs in incised abscesses, ulcers, wounds, burns and purulent otorrhea. Besides being perfectly harmless and free from any compromising odor, it remarkably hastens granulation and cicatrization.

On Typhoid Cystitis.—Despite the fact that in from 15 to 30 per cent. of all cases of typhoid fever, the specific bacilli are excreted through the urine, the occurrence of a cystitis is so rare that H. Curschmann (*Munch. med. Woch.*, Oct. 16, 1900) has seen but three cases. Cystitis is more liable to occur during the decline than during the height of the fever, and it is likely that the bacilli reach the bladder from the kidney, where they are filtered out of the blood. Clinically the subjective symptoms are remarkably slight, and a temperature elevation directly traceable to the cystitis was not observed. The urine appears similar to that in ordinary bladder inflammation, but, strange to say, is always acid in reaction when voided. Albumin is generally present, and as a rule there is but little difficulty in detecting the bacilli. The prognosis is fair, but the course is liable to be protracted. Internal drugs such as salol and uva ursi are generally all that is necessary and irrigations will be rarely required. Some have found a specific in urotropin.

Methylene Blue in Dysentery.—The success which he obtained in gastralgia with methylene blue caused Berthier (*La Méd. moderne*, Oct. 10, 1900) to think that it might be of use in dysentery. The dominant symptoms of dysentery are strong desire to stool, frequent stools, colic, tenesmus, and an arrest of the biliary secretion due to a nervous disorder of the intestine. The writer says that methylene blue answers these indications as it is a parasiticide, aiming at the pathogenic cause of the dysentery; an analgesic, acting upon the nervous condition of the intestine manifested by the hyperexcitability of the large intestine; a cholagogue, having a very pronounced cholagogic effect in dysentery. Berthier was the first to use methylene blue in dysentery and he reports his first case in detail,

and states that he has had uniform success in a cases from the following method of treatment. The methylene blue is administered in warm injections of a liter, or of half a liter at first until the intestine becomes tolerant, containing in solution from one to two decigrams of the methylene blue. Two to four injections are given daily. Until the patient has obtained a control sufficient to prevent accidents, four injections with two decigrams of blue are prescribed daily at hours such that the action of the drug extends over each two to four hours. Much care must be taken to favor tolerance of the injections. The patient should receive the injections as nearly as possible immediately after a stool, lying down with the reservoir a little elevated to facilitate the flow of the solution into the large intestine. After several injections the irritability of the hyperesthetic and intolerant intestine will be lessened. This result being due to topical action, the importance of repeating and prolonging the contact of the injection is understood; the patient should retain it as long as possible. There is no objection to more than four injections in twenty-four hours. Methylene blue is absorbed from the rectum very slightly. The urine becomes slightly bluish or greenish. Under the influence of the methylene blue the pains, colic, and tenesmus rapidly cease, and the desire to stool becomes less frequent. After one or two injections, or at latest on the second day, bile appears in the stools. This result appears to be due to the analgesic effect of the methylene blue. The writer thinks that the arrest of the biliary secretion in dysentery is due to a reflex action from the abnormal hyperexcitability of the large intestine. When the injections of methylene blue relieve this hyperexcitability, biliary secretion again becomes active. Methylene blue diminishes the virulence of bacteria, which are considered by some to be the cause of dysentery. It also indirectly lessens their virulence and toxicity by procuring the return of the biliary secretion, for the bile has undoubtedly an antiseptic and antitoxic action in the intestine. In those dysenteric patients who had gastric disturbance and vomiting, Berthier gave methylene blue by the mouth in doses of one to two decigrams with great success. The writer at the beginning of this treatment puts the patient on a milk diet and gradually adds eggs, meat, and rice. The patient's abdomen should be protected by flannel. Berthier believes that the simplicity of the treatment, its efficacy and the rapidity of its action, with the hasty disappearance of all symptoms, recommend methylene blue as the best treatment of dysentery.

Suppuration of the Parotid Gland.—H. P. Hamilton (*Western Med. Review*, Oct. 15, 1900) cites six cases illustrating the different pathological conditions causing suppuration of the parotid gland, discusses the pathology of each, and formulates the following conclusions: (1) Suppurations in the parotid gland may take place in any inflammatory disease. (2) Sup-

purations of the parotid gland are generally, if not always, due to septicemia. (3) Septicemia is not necessarily due to the so-called pyogenic germ. (4) Cases of mumps where the testicle is involved are always suffering from septicemia. (5) Nearly all patients with acute suppuration of this gland are delirious. (6) All can be relieved of this delirium in twenty-four hours by early incision. (7) Where suppuration exists in the parotid, death will probably follow if no incision be made to relieve same. (8) The incision should be made to include almost half the circumferences of the gland. (9) It is not necessary to curette more than is necessary to remove what pus comes into view, for suppuration invariably continues for several days thereafter. (10) When incision is made early the function of the gland is restored.

Dry Hot-Air Treatment in Private Practice.—

R. H. Irish (*Albany Med. Annals*, Oct., 1900) gives his experience with a portable hot-air apparatus in private practice, and reports some cases which he treated successfully. In warm weather "local baths" may be given in the office, but in winter this is not advisable because of the danger of catching cold after the profuse general perspiration which always follows even the "local bath." In treating a limb or part it should be wrapped in several thicknesses of Turkish toweling, bony prominences being especially well covered. The temperature usually employed is 350° to 375° F., but it is best to begin with 250° to 275° F., as patients are usually nervous during the first treatment. The limb should be kept at the above temperature for 40 to 60 minutes. The temperature beneath the toweling around the limb is about 100° F. less than that in the oven. Massage and passive movements should be given immediately on removal from the oven of cases of stiff joints or adhesions of tendons. In other cases the part is dried with a coarse towel, rubbed with alcohol, and bandaged or wrapped in blankets for a while. The "general bath" is given by well wrapping up the patient in blankets and placing an arm or leg in the oven. Or, the patient may be placed in bed under a tent made of bed clothes into which the open end of the cylinder is introduced. Irish has found a temperature of 180° to 200° F. for one hour to be sufficient for the general bath, though it may safely be raised to 275° to 300° F., the head remaining out. After treatment the patient should be wrapped in blankets for an hour, then sponged with tepid water, dried, and rubbed with alcohol. The primary effect of this treatment is a sense of intense congestion so that the loose toweling seems a tight bandage and the limb seems intensely hot, almost burning. The skin is tense and dry, and almost scarlet. There is usually increased tension and frequency of the pulse and sometimes a throbbing headache. After fifteen minutes the congestion disappears and sweating, local and general, is profuse. The tension of the pulse becomes normal and pain is at once re-

lieved. There is almost a local anesthesia of the part treated and a feeling of well-being and drowsiness. Dryness of the mouth and intense thirst are frequent and drinking of water is allowed *ad libitum* during the bath. Sweating continues to the end of the bath, and if continued too long, at too high a temperature, or too frequently repeated, it may weaken the patient. On removal from the oven the tissues are relaxed, skin soft and moist, pain relieved, and all tenderness gone. Any swelling or edema formerly present is diminished or absent. Irish enumerates the conditions in which the hot-air treatment is indicated and the results to be expected from it in each. He does not consider hot air a "cure all," but simply a valuable adjunct to other treatment as indicated above.

Estivo-Autumnal Malaria.—Dr. Aristides Agramonte (*El Progreso Medico*, Nos. 8, 9 and 10) reviews the parasitology of paludism. He considers that besides the two varieties of the estivo-autumnal malarial parasites described by Marchiafava and Bignami, namely, the quotidian and the tertian or malignant, there exist other varieties of this parasite. Clinical observation in tropical countries shows the existence of a number of forms of very severe malarial disease and these take on types that depart considerably from the quotidian and tertian forms of the estivo-autumnal parasite thus far described. Laveran is the only authority now who considers that the various malarial parasites may be polymorphic forms of one and the same protozoan. Experience in warm countries points very clearly to the fact that the parasites of the various forms of malarial disease are distinct entities, and that they are never by any chance transformed one into the other. Dr. Agramonte has tried very hard to obtain some method of cultivating the malarial parasite outside of the human body. He now believes it impossible. He recalls the fact that Dr. Coronado of Havana claimed some years ago to have discovered a culture method for the parasite. His experiments were considered of sufficient value to deserve the encouragement of the French Orfila Prize in 1894. No one else has ever been able to confirm his results. During the autumn of last year and the spring of the present year Dr. Agramonte tried faithfully to follow the directions given by Dr. Coronado, but without success.

Absence of Saliva.—Dr. L. Quintin (*Revista Medico Dental de Mexico*, Sept., 1900) reports a case of asialism. The patient came complaining of not being able to swallow his food for want of saliva. His voice was husky and his mouth exhaled a nauseous odor. His teeth were covered by a thick coating of sordes. The patient's general health, however, seemed reasonably good except for a certain weakness, probably the result of the disinclination for food that had existed for some time. Inquiry showed

that his urine was very much reduced in quantity. The patient presented some chronic eye trouble. For this it was ascertained he had been directed to use a solution of atropine. The case proved to be one of chronic atropinism. As soon as the atropine was stopped his condition began to improve, and at the end of the second week recovery was complete. The case seems a good illustration of the danger of allowing patients to have prescriptions renewed at will.

Pest Experience.—The conference on pest given by Professor Camillo Terni, Director of the Bacteriological Institute of Messina, before the Medical and Surgical Society of Rio Janeiro about the middle of the present year is reported (*Revista Medica de Sao Paulo*, Nos. 7, 8, 1900). The address contained an excellent review of the diagnosis, pathogenesis and prophylaxis of pest to date. Professor Terni concludes that the anti-pest vaccine of Haffkine provides the best conditions for the immunization of man and animals. The immunization thus acquired may last for a year, and may last even longer. The inconveniences claimed by some observers to occur after the use of this anti-pest vaccine are exaggerated and are not sufficient to constitute a contraindication to its employment.

"Puttee" Paralysis.—J. W. Springthorpe (*Intercolonial Med. Jour. of Australasia*, Sept. 20, 1900) reports the case of an officer who after an attack of enteric fever suffered from numbness, without actual pain, in the dorsum of both feet, followed by complete inability to raise the toes, and a partial inability to evert the feet. The right foot had recovered, but in walking the patient dropped and dragged the toes of the left foot. A great number of soldiers were similarly affected, and as the trouble seemed to be confined to those who had enteric fever, the condition was supposed to be a peripheral neuritis after enteric fever and was called "enteric feet." There was marked wasting of the tibial and peroneal muscles. The electrical reaction was normal, but weak. There was no tenderness on pressure over the nerves. The paralysis soon disappeared under faradism and massage. The trouble was confined to those muscles supplied by the peroneal nerve and its branches. This limitation of the condition suggested to the writer injury as its probable cause. It occurred to him that the puttees used by the soldiers might be the cause. The last few rounds of the puttees are fastened rather tightly directly over the head of the fibula, pressing the peroneal nerve against the bone, and the movements of the leg in marching increase this pressure. The writer thinks that this limited paralysis is due to the pressure of the puttees, and resembles "crutch paralysis." He was unable to ascertain whether this paralysis occurred only in those who had had enteric fever, but prefers to call it "puttee paralysis" rather than "enteric feet."

THERAPEUTIC HINTS.

To Relieve Vomiting.—Dr. Pepper's treatment for the vomiting of acute gastritis (*Therapist*, Oct., 1900) was one of the following prescriptions:

℞ Hydrarg. chlorid. mite 0.065 (gr. j)
Bism. subnit. 2.4 (gr. xxxvj)
M. Ft. Chart. xij. Sig.: Take one powder dry upon the tongue every three hours, until four or five have been taken.

℞ Acidi carbol. 0.25 (gtt. iv)
Sodii bicarb. 6.0 (3ss)
Elix. aurantii 15.0 (3ss)
Aqua q. s. ad. 120.0 (3iv)

M. Sig.: A teaspoonful every three hours.

Stomach Pain.—To relieve pain in the stomach, especially that of hyperacidity, Van Valzah recommends the following:

℞ Codeine 0.15 (gr. ¼)
Ext. belladon. 0.08 (gr. ⅙)
Magnes. calcinat. 2.0 (3ss)

Chorea.—Avoidance of emotional disturbance, rest, for the most part in bed, a little chloral to induce sleep, frequent sponge-baths, gentle massage, and pleasant, quiet diversion will often work great improvement in a few days. The diet should be easily assimilated, nutritious, and contain plenty of fat in the form of cream and butter. Choreics are prone to crave indigestible articles. Tonics, especially iron, are indicated; arsenic is useful, but is harmful and rarely efficacious when pushed to its limit of toleration. Sometimes, however, a short vigorous course of arsenic acts favorably, beginning with a single drop and increasing one drop at a dose up to 10 or 15 drops three times a day for a child of seven years. In the severe cases absolute rest in bed, or in a padded corner on the floor, the free use of chloral or even morphine, hot baths and cold packs and feeding by nasal or rectal tube may be required. Strychnine helps to sustain the heart. Sulphonal, trional, exalgin, and antipyrin have given help in some cases. In the chorea of pregnancy it is not necessary to terminate gestation unless the motor storm is violent, the mental features pronounced, or the physical state low.—*Church and Peterson.*

Ichthyol in Acne.—As an external agent, writes Geo. T. Elliot, ichthyol in watery solution, 5 to 50 per cent., is most valuable. It is of special benefit in cases with much pustulation, and in full strength, or in a fifty-per-cent. dilution, it has commonly served the purpose of aborting a beginning lesion. In those cases of acne in which, from time to time, one or two papules begin to develop, ichthyol is a valuable agent in cutting short the career of these fresh lesions.—*Reference Handbook of the Medical Sciences*, Vol. I.

Purpura.—Simple purpura demands arsenic,

first in moderate doses, then increased until beginning toxic effects. Iron perchloride, grams 2.0-4.0 (3ss-j) daily, and if there is anemia, the inhalation of oxygen will promote hematosis. The disease requires fresh air in abundance and a generous diet. In peliosis rheumatica, in addition to the above measures, the salicylates may influence the joint affections. In purpura hemorrhagica much nourishment, by supporting the patient's power, is of the greatest service. Internally turpentine, acetate of lead, and dilute sulphuric acid are recommended, and the following:

℞ Fl. ext. ergotæ.....
Tinct. ferri chlorid.....aa 60.0 (3ij)

Three to ten drops in water, three times a day, has proven useful in the author's cases. The management of secondary purpura is that of the diseases and conditions which it accompanies.—*J. M. Anders in "Practice of Medicine."*

Acupuncture in Lumbago.—In lumbago and similar myalgias, Sir James Grant inserts 12 or 14 small (No. 8) fine needles into the muscle through the skin for about one-half to three-quarters of an inch. He places them about the same distance apart, and leaves them in for one or two minutes. Although before puncture the painful muscles may be hard and tense, they soon relax and become soft, pliable, and painless. The patients, although previously disabled on account of the pain, can walk about freely when the needles are removed. After their removal the skin is sponged, and friction applied with a rough towel.—*Montreal Medical Journal.*

Mitral Stenosis.—When from neglect of precautions, from overtaxing the strength, from depressing emotions, or from the advance of the disease, decided symptoms of right ventricle failure supervene, such as great weakness, cough, dyspnea, with evidence of venous stasis in swollen jugulars and enlarged liver and dropsy, then use smart purgation by calomel or blue pill and colocynth, followed, if necessary, by salines. If the symptoms are urgent, venesection is of value; in certain cases no other treatment will take its place and avail to avert a speedy fatal termination. The indications are not a full, bounding pulse, but a small, weak, irregular pulse, many of the beats being scarcely perceptible. The heart will be beating violently, the apex beat almost imperceptible, epigastric pulsation marked, the liver enlarged, perhaps pulsating, and the jugulars full and pulsating. The contrast between the powerful right ventricle impulse and the small, weak pulse is very striking, and is one of the most important indications for venesection. This, with relief of the portal circulation by purgation, prepares the way for digitalis and like remedies, which without these measures afford no relief, and may indeed do harm. Digitalis should never be given for long at a time and its effect should be carefully watched.—*Sir W. H. Broadbent.*

THE MEDICAL NEWS.

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SATURDAY, NOVEMBER 17, 1900.

THE PLAGUE SITUATION AT SAN FRANCISCO.

THE MEDICAL NEWS has commented from time to time on the fact of the presence of the Plague at San Francisco. Its persistence there calls for more active measures on the part of the local health authorities.

For the past eight or nine months at least plague has been present in that city, the secular and medical press to the contrary, and it would seem that had an energetic program been carried out, such as was done for the city of Glasgow, we would not have the uncomfortable situation outlined by Surgeon J. J. Kinyoun in the last Public Health Report, published in another column of this week's issue of the MEDICAL NEWS.

It has been steadfastly denied in some quarters that Plague has been present in the city, and the prophylactic measures, at one time adopted by the city health department, have ceased on the ground of lack of evidence and the difficulty in coping with the peculiar conditions prevalent in Chinatown.

The present outlook, according to Dr. Kinyoun, is that a more extensive outbreak is to be expected, and, if this is true, it is time that the health department of the city of San Francisco and the State of California should make more decided efforts at effectual sanitation.

POLYNEURITIS OF MALARIAL ORIGIN.

Most infections are primarily local, although they may extend by continuity or contiguity of structure and become widely or even generally disseminated through the blood-vessels or the lymphatics. The local disturbances result in part from the presence of the causative agents as foreign bodies, and in part from the biochemical reactions that take place between them and the cellular elements, while the constitutional disturbances, such as fever, headache, delirium, coma, are due to the absorption into the circulation of the toxic products resulting from the vital activity of the invading organism. These latter effects are generally expended upon the parenchymatous elements of the various viscera, and give rise to diverse aberrations of function, which sometimes will be found to be dependent upon alterations in structure, while at other times no lesion can be discovered with our present means of investigation.

The nervous system appears to be especially susceptible to influences of the kind under consideration, and during the last decade much has been added to our knowledge of the cerebral, spinal, and neural complications of the infectious diseases, and of the readiness with which the brain, cord, and peripheral nerves respond to toxic influences apart from infectious processes. Some of these poisonous substances appear to have a certain degree of selective affinity and to exert specific effects. Thus, the diphtheria toxin seems to attack by preference the palatal and other muscles and to cause paralysis; the tetanus toxin, to attack the motor apparatus and cause spasm; while all, in common, give rise to fever.

These reflections are applicable not alone to infections of vegetable origin, but likewise to those of animal origin, as, for instance, malarial fever and amebic dysentery, or of metabolic origin, as, for instance, the autointoxications, such as diabetes. In the malarial infections the plasmodia attack the red blood-cells, which they disorganize, and thus they induce anemia; in the spleen, in which they lodge, they give rise to hyperplasia; and the toxic products of their biological activity, it has been found, are capable of causing inflammation of nerves and presumably also of other parts of the nervous system.

The occurrence of peripheral neuritis as a complication of malarial fever has been reported from French, English, and American sources, and a case of more than ordinary interest is recorded by Baumstark (*Berliner klinische Woch-*

enschrift, 1900, No. 37, p. 815). The patient was a young man previously healthy, without a history of alcoholism or infectious diseases, in whom following an attack of malarial fever in the tropics, rapidly progressive paralysis developed in the lower extremities, with paresis in the upper, difficulty in swallowing, in speech and in the movements of the diaphragm, involuntary choreiform movements, and ataxia in the remaining voluntary movements of the upper extremities, abolition of the reflexes, especially the knee-jerks, derangement of sensibility, pain and tenderness in the muscles and the nerve-trunks, flaccid atrophy of the muscles, transitory incontinence of urine, quantitative and qualitative electrical changes, diaphoresis, and enlargement of the spleen.

There was no doubt of the existence of multiple peripheral neuritis, for which, in the absence of other etiologic factors, malarial fever was considered responsible, although malarial parasites were not found in the blood. The history, the gradual onset and invasion, the symmetrical distribution of the palsy in all four extremities, with predominant involvement of peripheral parts, especially in the perineal distribution, the pain and tenderness in muscles and nerves and the sensory changes, all negated the diagnosis of anterior poliomyelitis. Further, the paralysis was confined to definite peripheral nerve-areas, rather than to muscles controlled by related groups of ganglion-cells in the anterior horns of the spinal cord. As against acute ascending paralysis were the onset with weakness in both upper and lower extremities simultaneously, the rapidly progressive development of the paralysis without actual extension, the favorable termination, and the sensory and electrical changes. Ewald (*Berliner klinische Wochenschrift*, 1900, No. 38, p. 845) also has reported a case of polyneuritis, occurring in a man, thirty-one years old, who had had an attack of malarial fever in the tropics and in whom there developed epigastric pain, with girdle-sense, paresthesia, anorexia, nausea, uncertainty, and, finally, loss of gait, impairment of memory, incontinence of urine, paresis and atrophy of the lower extremities, abolition of the knee-jerks, as well as of the cutaneous and periosteal reflexes, tenderness of the calves, indistinctness of speech, mental deficiency, enlargement of the spleen, unsteadiness in standing, sluggishness in the accommodative response of the pupils. Great improvement took place under appropriate treatment.

ECHOES AND NEWS.

NEW YORK.

Dr. Emmet and the Woman's Hospital.—It is reported that Dr. Thomas Addis Emmet has resigned from the staff of the Woman's Hospital. His successor has not yet been appointed. His son, Dr. J. D. Emmet, is temporarily acting.

New York Pathological Society.—At a regular meeting of this Society, held Wednesday, November 14th, Dr. E. M. Evans showed a case of congenital displacement of the heart; Dr. N. B. Potter reported a case of ruptured spleen from malaria, and Dr. O. H. Schultze one of hemorrhagic pancreatitis with fat necrosis and cyst of the stomach; Dr. Harlow Brooks presented the organs from a case of death by ether; Dr. Geo. P. Biggs showed specimens of tuberculous endometritis and tuberculosis of the bile-ducts; Dr. L. O. Conner reported cases of duodenal ulcer of embolic origin and carcinoma of the prostate; Dr. Herter contributed some remarks on diabetic coma.

Obituary.—Dr. Nathaniel P. Rice, an army surgeon in the Civil War, died of paralysis in a private sanitarium in this city on Saturday last. He was born in Cambridge, Mass., in 1828, and was graduated from Harvard with the famous class of '49. He studied medicine at the Harvard Medical School. At the outbreak of the Civil War he enlisted with a New York volunteer regiment. Two years later he was appointed a surgeon in the regular army. In 1864-65 he was medical director in Virginia and North Carolina. For a number of years he was in the bond department of the New York Custom House.

New York Hospital Fire Alarm.—Electricians at work Tuesday, November 13th, in Superintendent Ludlow's office, on the first floor of the New York Hospital, accidentally "crossed" the wire that connects the building with the Fire Department, and which is used for alarms in case of fire. The crossing closed the circuit and sent in an alarm to the Fire Department. Engine Company No. 14 and Hook and Ladder No. 3 came rushing around and found everything peaceful; nothing was known of the alarm at the hospital, until the firemen stopped in front of the building. Then the alarm was investigated and explained. There are 188 patients in the hospital, but fortunately none of them was frightened, and there was no excitement.

Warning Against Dog Bites.—Commissioner John B. Cosby of the Board of Health made the following statement this week:

"The Department of Health desires to call the attention of physicians and others to the occurrence of a number of cases of rabies among dogs throughout the city, and would request that whenever persons are bitten by strange dogs or

stray dogs they immediately consult a physician and have their wounds cauterized, and if then there is any question as to the existence of rabies in the animal communicate at once with the Department of Health."

Dr. Cosby said that there had lately come to the notice of the department several instances in which people bitten by dogs had neglected to have the wounds cauterized. He said that on Saturday a boy was bitten by a fox hound which, when examined, was found to have rabies. This dog, Dr. Cosby said, had bitten several other dogs if what he had heard was true.

State Veterinary College Burned.—The New York State Veterinary College building, which is a part of Cornell University, was partially destroyed by fire November 13th. The fire broke out on the third story, which is used as a laboratory by the veterinary and medical students, and the third story, together with valuable apparatus, was destroyed. The building was built by New York State for the veterinary department in 1895, at a cost of \$60,000. The building also contained valuable laboratory apparatus and the Roswell P. Flower Library of Veterinary Science. It was constructed of white brick and was one of the handsomest buildings on the campus. The loss is estimated at \$30,000, which will be covered by insurance. The library was saved, but was badly damaged by water.

Resident Students Wanted at Craig Colony.—The Craig Colony for Epileptics, at Sonyea, Livingston Co., N. Y., wants two recent graduates in medicine to serve six months, or a year, as resident students. The position is the same as that of medical interne in a general hospital. In addition to the unsurpassed opportunity for studying epilepsy (there are now 700 cases in the Colony), special opportunities exist for studying nervous and mental diseases and acquiring experience in general medical and surgical work. The incumbent receives board, lodging and washing, but no pay. Write to the Medical Superintendent, Dr. Wm. P. Spratling, at Sonyea, Livingston Co., N. Y., if further information is wanted.

New York State Medical Society.—The ninety-fifth annual session of the Medical Society of the State of New York will be held in Albany January 29, 30, 31, 1900. The meetings of the Society have always been replete in scientific work as becomes the representative society of the medical profession of the Empire State, and it is confidently expected that this meeting will equal those which have preceded it.

This circular letter is sent to every member of the Society with the request that those who desire to read papers will communicate at once with the Chairman of the Business Committee, Dr. Frank Van Fleet, 63 East 79th Street, New York City, or with the President, Dr. A. M. Phelps, 62 East 34th Street, giving the title of

the paper and such other information as the author desires.

As there will be a great many papers offered, and the time necessarily limited, it is suggested that papers be condensed as much as possible in reading, as they can be published more fully in the Transactions. Arrangements for reduced fares can be made when purchasing railroad tickets.

The Craig Colony Prize (for 1901) for Original Research in Epilepsy.—Dr. Frederick Peterson, President of the Board of Managers of the Craig Colony for Epileptics, at Sonyea, N. Y., offers a prize of \$200.00 for the best original unpublished contribution to the pathology and treatment of epilepsy. Originality is the main condition. All manuscript should be submitted in English. The prize is open to universal competition. Each essay must be accompanied by a sealed envelope, containing the name and address of the author and bearing upon the outside a motto or device, which is to be inscribed also upon the essay. All papers received will be submitted to a committee, consisting of three members of the New York Neurological Society, and the award will be made upon its recommendation at the annual meeting of the Board of Managers of the Craig Colony, October 8, 1901. Manuscripts should be sent to Dr. Frederick Peterson, 4 West 50th Street, New York City, on or before September 30, 1901. The successful essay becomes the property of the Craig Colony and will be published in its annual report.

Craig Colony Prize.—The following announcement is made:

NEW YORK, October 8, 1900.

TO THE PRESIDENT OF THE BOARD OF MANAGERS,
Craig Colony, Sonyea, N. Y.

SIR:—Your committee of the Craig Colony Prize for Original Research in Epilepsy for the year 1900 begs to report that it cannot recommend that the prize be awarded. This verdict is a source of especial regret, as this committee arrived at the same conclusion in regard to the prize of 1899. This year but one essay was submitted.

In view of its failures, for two successive years, to recommend the awarding of the prize, your committee feels called upon to state what, in its opinion, is necessary for an essay to be considered deserving.

By the terms governing the competition, original research is a primary requisite. Research as to the pathological anatomy, the chemistry, the symptomatology, the causation, the treatment, or the nature of epilepsy, as to the position occupied by epilepsy in regard to social economics, or, in short, anything which will advance our knowledge of the disease, is what the prize calls for. It is, of course, necessary that the facts advanced be presented in a way to convince an unbiased critic of their accuracy, and that the

conclusions drawn be justified by the facts. No essay submitted either this year or last year has attained this standard. In view of the fertility of the field, of the constantly increasing number of investigators and of the present perfected facilities of research, your committee believes that the prize having failed to attract more meritorious contributions is to be explained by its not having been sufficiently called to the attention of original workers. It would recommend, therefore, that for the ensuing year no pains be spared to have the existence of the Craig Colony Prize made known to all qualified to compete for it.

Yours respectfully,

GEO. W. JACOBY, M.D.
PEARCE BAILEY, M.D.
IRA VAN GIESON, M.D.

Loomis Sanitarium.—At the last meeting of the Board of Managers of the Loomis Sanitarium for Consumptives at Liberty Heights, Liberty, New York, it was decided that the time has now arrived to increase the charitable work in connection with the Institution, and that the present Sanitarium should be known as the Self-Supporting Division; the new plant to be erected to be known as the Charitable Division.

Ever since this Sanitarium was started, there have been a limited number of free patients provided for, and a few have always been carried at greatly reduced rates, but the managers have not been able to meet the great demand made upon them, by people of very limited or no means, for free treatment. It is their purpose, at first, to have the Charitable Division accommodate twenty-two patients, and the rates are not to exceed \$5.00 a week *per capita*; this rate will include board, lodging, and medical attendance. They also guarantee to make a certain number of these original twenty-two beds free each year, and within five years to have the whole number free. Additions to the Charitable Division will, of course, be made from time to time, and the rates charged will in no instance exceed \$5.00 a week, and as many free beds will be established each year as possible. The Charitable Division will be located about half a mile distant from the Self-supporting Division, but they will be managed under a single administration.

The Medical Board held its annual meeting a few days later and heartily endorsed the action of the managers, promising them all possible support in their worthy undertaking. At this meeting speeches were made by Dr. Henry F. Walker, Dr. Daniel Stimson, Dr. H. P. Loomis, Dr. Chas. E. Quimby, Dr. Frank Miller, and Dr. J. Edward Stubbart, all of whom expressed the opinion that the enlargement of this Charitable Division was not only a worthy provision, but an immediate and urgent necessity, and they believe its growth will be even more rapid than has been that of the Self-supporting Division during the four years of its life. During that time, this Sanitarium has grown from five to twenty-one

buildings and from a capacity of twelve to one hundred and twenty-five patients, and it is still growing. It seemed to be the united opinion that the method of working a Self-supporting and Charitable Division under one administration, whereby the surplus income from the one could be utilized toward the support of the other, is an ideal way of administering charity upon a solid and sound basis.

New York State Conference of Charities.—This Conference, designed to meet annually in this State, has been inaugurated for the consideration of questions of practical importance with relation to the public and the private charitable and correctional work of the State, with the hope that the Conference will be able to exert a powerful force for good in securing intelligent action upon such questions. Conferences similar in purpose have for some time been organized and carried on in many of the States, principally in the West, and those who are well informed on the subject regard them as sources of beneficent influence. All who are officially connected with public or private charitable or correctional work in New York State, or who take an active interest therein, are invited to enroll themselves as members of the Conference and to attend its sessions. There are no other tests of membership, and no membership fee is charged, the expenses of the Conference being met by voluntary contributions. The Conference meets at the Capitol in Albany Tuesday, Wednesday and Thursday, November 20, 21, 22, 1900. On the opening day addresses will be delivered by Hons. W. R. Stewart, J. H. Blessing, Bird S. Coler, William P. Letchworth and Rev. T. A. Hendrick. On Wednesday papers will be ready as follows: "Need and Value of Settlement Work," by J. B. Reynolds; "The Breaking Up of Families," by E. T. Devine; "Classification of Destitutes," by Hon. A. Goetting; "A Model Institution," by D. Delehanty; "New York's System of Caring for Destitute," by Homer Folks; "Causes of Children Becoming Charges," by Dr. W. O. Stillman. On Thursday the following papers will be read: "Duty of State to Idiotic and Feeble-Minded," by Dr. J. F. Fitzgerald; "Cooperation in Hospitals for the Insane," by Hon. P. M. Wise; "New York's Prison System," by H. G. McLaughlin, and "Houses of Refuge for Women," by Mrs. C. L. Lowell.

Free Pasteur Treatment.—President Murphy of the Health Board has announced that no new cases of hydrophobia have been recorded recently, but he is reported to have said that he is confident that the notice to the effect that the Health Department would care for all cases free of charge would bear good fruit. "Only a week or two ago," said President Murphy, "we sent out a notice to all physicians that we were prepared to treat hydrophobia cases at the Willard Parker Hospital. We have been prepared to do that for two years, but the public didn't know it.

We think the city ought to care for patients suffering with rabies and for people who have been bitten by dogs."

The notice sent by the department to physicians said that treatment for the prevention of rabies, according to the method of Pasteur, would be administered free to any person residing in Greater New York; that it would be administered on request to persons outside the city upon the payment of \$50 for the virus used, and that to persons unable to pay that fee treatment might be administered without charge by direction of the Board of Health.

Wealey M. Carpenter Lecture.—This lecture was given by Dr. James Ewing, Thursday, November 15th, at the Academy of Medicine, on "Conjugation in the Asexual Cycle of the Malarial Parasite." He said: "The evidence which favors the belief in conjugation of the amœboid forms of the tertian parasite consists in the observation of several cases, showing two broods of parasites, one of which was very young, the parasites being very often twinned, and the other full-grown and invariably single. In one case the young brood of twins was found to be succeeded by a later brood, all single. By the application of Nocht's stain all stages of the union, first of the bodies, later of the two or three chromatin masses present in the conjugating parasites, were observed. Several possible objections to the theory of conjugation were considered, including the doubtful significance of multiple chromatin grains in young parasites, and the possibility that one of the twins may be destroyed and extruded, while the other goes on alone to full development. Conjugating forms are usually scarce and difficult to find except in rich infections and in initial or second paroxysms.

The speaker suggested that the tendency toward spontaneous disappearance of malarial infection in the human subject may be referable to exhaustion of the power of reproduction by conjugation and the necessary development of bisexual forms which in the human host are sterile.

The conjugating parasites were usually found to suffer in appearance. One presents the ordinary thin ring form of the young tertian organism, while the other is coarser, and may not assume the ring form, or, if it does so, the ring incloses little hemoglobin. The coarse ring appears to develop, when not conjugating, into a compact, densely-staining body with six nuclei, and resembles the flagellating body seen in shed blood which has been kept moist for 15 or 20 minutes. It probably does not flagellate in the circulating blood, but reaches the stage of subdivision of chromatin granules, and is capable of developing the microgametes, or fertilizing flagella, of the bisexual cycle, which is completed in the mosquito. The thin ring form developing singly produces a body which resembles the macrogametocyte of shed blood. Both these

forms in their full development in circulating blood resemble the microgametocytes and macrogametocytes described by Bastianelli and Bignami in the mosquito stomach and also traced by them, indistinctly, in the circulating human blood. The author considered the biological significance of conjugation among related protozoa, finding abundant field for this method of reproduction in the malarial parasite. Among related protozoa reproduction by conjugation of individuals not fully differentiated into sexes serves as a method of multiplication for three or four generations, after which this method is incapable of developing new individuals, and another, bisexual, method of reproduction is rendered necessary, usually associated with a completely new phase of existence in a new host. The full significance of the process was claimed for malarial conjugation, and it was not to be regarded as a form of embryonal cohesion as described by Pfeiffer and illustrated in many gregarines.

The single and the conjugating cycles of the tertian parasite were illustrated by colored lantern slides.

Transfer of Criminal Insane.—The first transfer of insane convicts from the Matteawan State Hospital to the new hospital at Dannemora, Clinton County, was made last Wednesday, when forty-eight male patients were sent from Matteawan by rail in charge of attendants. Within a month another transfer will be made to bring the total population of the new institution up to 150, which is its present capacity.

PHILADELPHIA.

German Hospital.—The new dormitories at this hospital have been formally taken possession of by the employees. The dormitories were built because the crowded condition of the hospital rendered necessary the use of the attachés' rooms for the care of patients.

Dr. Yglesias.—Dr. Manuel S. Yglesias, Health Officer of Vera Cruz, Mexico, was recently in this city. While here he made an inspection of the State Quarantine Station at Marcus Hook in order to familiarize himself with the methods there used.

Inspection of Dairies.—Col. J. Lewis Good, Chief of the Bureau of Health, and Drs. Abbott and Stewart, bacteriologists, are making a tour of inspection of the various dairies which furnish the bulk of Philadelphia's milk supply.

Sanatorium Incorporated.—Articles of incorporation have been filed by the Pennsylvania Sanatorium Company, with a capital stock of \$50,000. The object of the corporation is to treat consumptives and an institution for that purpose will be built at Clifton Heights, a suburb of this city.

An Honored Guest.—Dr. Tilmann, Professor of Surgery in the University of Greifswald, Germany, visited this city recently as the guest of Prof. W. W. Keen and operated in the latter's clinic at the Jefferson Hospital. A reception to Dr. Tilmann at the University Club was attended by the prominent surgeons of the city.

Medical Aid Association.—The Mutual Aid Association of the Philadelphia County Medical Society held its annual meeting November 12th. The Association has been in existence for twenty-two years. Aid is extended to widows and orphans of members and also to members themselves if long illness or accident render this necessary. The Association is one of the residuary legatees of the estate of the late Dr. Albert Frické.

Preliminary Education of Medical Students.—An interesting compilation of the register of new students at the University of Pennsylvania has been made with reference to previous educational institutions attended. The list shows that 71 per cent. of the medical freshmen have matriculated at some college or university. In the law department 57 per cent. are from colleges, while in the dental department only 15 per cent. are college men. The above figures are highly gratifying to the medical profession.

Philadelphia Hospital.—Dr. David Riesman reports a case of abscess of the liver in a male patient, with operation and recovery. Aspiration was made and this was afterward followed by operation. The transpleural route was chosen, no serious results occurring from the pneumothorax thus caused. Three quarts of chocolate-colored fluid, which proved to be sterile, was evacuated. Regarding the diagnosis of single abscess of the liver, great stress was laid upon the shape of the abdomen. This is a peculiar flattened-cylinder appearance which is not seen in other conditions.

Druggists' Grievances.—A few more of the druggists have paid their fines for failing to display their licenses properly, others have appealed their cases. A large number of the prosecutions have been dropped by an agreement between the State Pharmaceutical Board and the Retail Druggists' Association. The latter is to introduce a bill in the State Legislature to abolish the law requiring a registration and payment of \$3.00 every three years.

A Record for Dislocations.—A young man, twenty-six years of age, was lately treated at one of the city hospitals for dislocation of the left shoulder. The patient stated that this was the thirty-eighth time the shoulder had been dislocated. The man was formerly a traveling salesman and has been treated by many of the prominent surgeons of the country. The joint is very easily dislocated, but the reduction is always difficult, ether having been given during twenty-eight of the reductions. The patient refuses op-

erative procedure which, it is believed, would prevent future dislocations.

Newspaper and Medical Items.—It is a well-known fact that the daily papers often give glowing and distorted accounts of some case or of surgical operations. Some physicians have been strongly suspected of encouraging newspaper mention of their doings, but it is hardly necessary to state that reputable practitioners discountenance it. Dr. W. W. Keen has recently made an effort to stop all press reports of his clinics and it is to be hoped that all the surgeons of the city will organize and take a determined stand in the matter. One of the city papers has continued to print reports of impossible clinics after being courteously requested by Dr. Keen not to do so. A move in the right direction has been made and the profession should see that such demands are complied with.

CHICAGO.

Polish Hospital.—A hospital to cost \$250,000 is to be erected by the Sisters of the Holy Family of Nazareth in this city. It will occupy an entire block, will be constructed of cut stone and pressed brick, will be equipped with all modern appliances and ready for occupancy some time in October, 1901.

Medical Inspection of Schools.—As a means of keeping the expenditures of the Department of Medical Inspection within the appropriation for its maintenance, the Board of Education of Chicago has ordered that the general medical inspection of the schools be discontinued for the remainder of the calendar year. In its place a new system, which will greatly curtail the expense, has been inaugurated. Ten of the original fifty inspectors will be retained and an emergency corps established in each division.

Chicago's Paris Medal in Pawn.—If Chicago can raise 600 francs (\$120) it can secure a gold medal for the exhibition of the City Health Department at the Paris Exposition. The medal has come C. O. D. and is held by Columbia University. Commissioner Reynolds was notified yesterday that the gold medal award had reached New York and was held by the authorities of Columbia University pending the delivery of the money.

Freed from the Grip of Quacks.—When enough of the country papers show the good sense and backbone which is very manifest in the office of the *Brown County Herald*, published at Hiawatha, Kan., the clause in the advertising contracts of the nostrum makers which virtually compels the papers to oppose any legislation which is for the good of the community by being inimical to the nostrums will lose its power. The *Brown County Herald*, in a recent number, said:

We have at last done what we have wanted to do for many years—we have thrown out of this paper every advertisement that can be by any chance considered objectionable in any de-

gree. And hereafter we shall print no offensive advertisements. We have an idea that every advertisement is read, and this being so, we don't want any one to read or to put any faith in the cure-alls and nasty nostrums that are always conspicuous advertisements in every possible newspaper in every possible public place in America. If persons are ailing, they should not hesitate to consult a reputable physician. Another thing: From this time on we will not print advertisements of traveling quack doctors. We want clean advertising matter, or else we want none. This means a loss to us of not less than \$800 a year.

We believe that the people who have glanced at ——— offensive propositions, and at ———, ——— *et al.*, including the bids of various quack doctors to cure weak and suffering men and women, will miss them in this paper with not a little pleasure. It makes no difference what ails you, don't be afraid to tell an honorable physician about it, and submit to his advice and treatment.

Beware of quack doctors.

Don't read filthy ads.

Don't buy quack medicines.

Don't have anything to do with strange doctors. They are generally disreputable, and entirely unable to do any more for you than to mercilessly take your money.—*Drug Circular.*

Testimonial Banquet to Dr. Christian Fenger.

—A testimonial banquet was tendered to Dr. Christian Fenger at the Auditorium Hotel, Chicago, November 3, 1900. It was a representative gathering, there being over five hundred physicians present from all parts of the United States. The meeting was called to order by Dr. J. B. Murphy, who introduced as toastmaster Dr. Charles A. L. Reed of Cincinnati, Ohio, President of the American Medical Association. Dr. George N. Kreider of Springfield, Illinois, and Dr. William A. Evans of Chicago read letters and messages of regret from the officers of various State, County and local medical societies in the East, West, North and South. Dr. W. W. Keen of Philadelphia presented the loving-cup to Dr. Fenger. One side of the cup bore the inscription:

"This great good man for noblest cause displays,
What many labors taught, and many days."

On the other side is inscribed: "To Dr. Christian Fenger, on the sixtieth anniversary of his birth, from those who know and love him best—THE MEDICAL PROFESSION." Dr. Fenger accepted the loving-cup in a brief but felicitous speech. Toasts were responded to as follows: "The Physician as a Leader of Men," by Dr. Edwin Ricketts of Cincinnati, Ohio; "The Physician in Times of Plenty," by Dr. W. H. Earles of Milwaukee, Wisconsin; "The Physician in Times of Adversity," by Dr. J. M. Mathews of Louisville, Kentucky; "The Physician as a Scientist," by Dr. N. Senn of Chicago, Illinois; "The Physi-

cian as a Good Fellow," by Dr. C. A. Wheaton of St. Paul, Minnesota; "The Physician in Times of War," by Dr. C. B. Nancrede of Ann Arbor, Michigan; "The Physician in Times of Peace," by Dr. William E. Quine of Chicago, Illinois; "The Period of Awakening and the Period of Progress," by Dr. Christian Fenger of Chicago, Illinois. Dr. G. Frank Lydston of Chicago recited in an admirable manner a humorous but eulogistic poem, written in Hoosier dialect, on Dr. Fenger. Dr. L. H. Watson of Chicago likewise paid a tribute to the illustrious guest in a poem. Dr. C. Lange of New York City and Dr. Victor C. Vaughan of Ann Arbor, Michigan, made brief speeches, in which they eulogized Dr. Fenger.

GENERAL

Plague in Mauritius.—Fifty fresh cases of bubonic plague occurred on the Island of Mauritius last week. Thirty-four deaths have resulted from the disease.

Smallpox Epidemic in Paris.—An epidemic of smallpox has broken out in Paris, due probably to the massing of Arabs and other people from the East during the exhibition. Notices have been posted by the police warning persons who have not been vaccinated within six years to be vaccinated now. Every precaution to stamp out the disease has been taken.

Obituary.—Dr. W. M. Ansell, a prominent physician of Cleveland, Ohio, died recently at the residence of M. O. Waggoner, in Toledo. The cause of death was heart disease.

Dr. Robert B. Brown died November 13th at his home in Phillipsburg, N. J., of heart trouble, at the age of seventy-six. In the Civil War he was a sergeant in the Union Army and for several years afterward was stationed at Galveston, in charge of work for the Government. One daughter survives him.

St. Louis Medical Society of Missouri.—The program of the meeting of Saturday, November 10, 1900, of the Society included the following papers: "Report of a Case of Malignant Icterus," by Dr. T. A. Martin; "Two Recent Cases of Pelvic Surgery with a Criticism of Prevailing Methods of Drainage," by Dr. G. Wiley Broome.

Unnecessary Taxation.—The MEDICAL NEWS calls the attention of its readers to the following letter: At the last meeting of the Congress of American Physicians and Surgeons we were appointed a committee with full powers to urge upon the Congress of the United States the repeal of those provisions of the War Revenue Act of 1898 which lay a tax on legacies to educational, charitable and religious organizations.

A petition has been introduced into the Senate by Senator Lodge, and a copy is in the hands of the Hon. Sereno Payne, Chairman of the Committee on Ways and Means of the House.

Will you not exert your utmost influence with any members of the Congress of the United

States whom you can address personally or by letter on the subject of such appeal?

The revenues of the government are admittedly unnecessarily large and commercial interests will not be idle.

Hoping that we can count on your active interest in this matter, we remain,

Yours very truly,

FRED'K C. SHATTUCK.

ABRAHAM JACOBI.

WILLIAM H. WELCH.

Yellow Fever in Havana.—Surgeon A. H. Glennan, Chief Quarantine Officer for the Island of Cuba, has made a report to the Treasury Department on the yellow-fever situation in Havana. He says that the number of cases decreased in the last week of October and that there were only thirteen deaths in that week. He quotes Major W. C. Gorgas, U. S. A., Chief Sanitary Officer, as saying that, notwithstanding the general distribution of the disease, infecting localities not heretofore infected, and the large number of people attacked, an epidemic condition does not exist and that such a situation in Havana is impossible. He says that from June 1st to October 19th there were 789 cases officially recorded; that the official maps of the city show that there are 857 square blocks in the city, and that of this number 525 square blocks have had no cases at all. "The acceptance of the term as it is generally understood in the United States and as applied to epidemics in our great cities," he says, "certainly show no epidemic here at the present time." In a population of 242,000 the average in Havana in October was ten new cases of yellow fever a day.

Plague at San Francisco.—Official reports show that two additional cases of the plague were confirmed on November 2d.

Yellow Fever at Natchez.—One case of yellow fever was reported from Natchez, Miss., November 6th.

Surgeon-General Sternberg's Report.—In his general remarks on the gunshot wounds of 1898 and 1899 the Surgeon-General says: Of the 4919 men injured by gunshot during the years 1898 and 1899, 586 were killed and 4333 were wounded and received into the field and other hospitals. The killed constituted 11.9 per cent. of those struck; the wounded 88.1 per cent. In other words, 1 man was killed for every 7.4 wounded. The Mauser bullet must, therefore, be regarded as less deadly than the larger missile used during the Civil War. The Medical and Surgical History of the Civil War shows the following casualties:

	Killed.	Wounded.
United States troops.....	59,860	280,040
Confederate troops.....	51,425	227,871
Total	111,285	507,911

In percentages the casualties were: Killed 17.97; wounded 82.03, or 1 man killed to every 4.56 wounded. The relative proportion of killed

was therefore considerably larger during the Civil War than during our recent experiences. It is to be noted also that many of the wounds of the past two years were made by missiles of large caliber. Of those reported in 1899, 471 were specially stated as having been caused by the Remington bullet of caliber .45. It is safe to say that had the whole number of wounds received been inflicted by the smaller Mauser or Krag-Jorgensen bullet the percentage of immediately fatal wounds would have been materially lessened.

The less deadly character of the injuries inflicted by the modern bullet is manifested also when we exclude the killed and regard only those wounds which came under the care of the surgeons. Of these, during the two years, there were 4333, and 259 of the patients, or 6 per cent. of the whole number, died. The corresponding percentage from the records of the Civil War was 14.3. Table C in Part I. of the Medical Volume of the Medical and Surgical History of the War of the Rebellion shows that among the white troops of the Army there were borne on the reports of sick and wounded 230,018 gunshot wounds, of which 32,907 or 14.3 per cent. proved fatal. The marked reduction of the ratio of killed to wounded may be placed to the credit of the small caliber bullet; but the lessened mortality among the cases which came into hospital may not wholly be attributed to the humane character of the wounds inflicted by this missile. Due credit must be given to the improved surgical methods of the present day. Wounds of any region of the body may be taken in comparison and the result will always be found to show a decided lessening in the percentage of cases ending fatally among those of the past two years as compared with those of the Civil War. Take, for instance, gunshot wounds of the femur. During the Civil War surgeons in the field hospitals regarded a fractured femur as a serious menace to life, the danger from which was believed to be materially lessened by an immediate amputation. The field hospital surgical work after a battle consisted in great part of amputations, excisions and resections. Of 6576 fractures of the femur 2923 cases were treated by primary amputation, 186 by resection and the remaining 3467 by conservative or expectant measures; this conservative action being due in many cases to a want of favorable conditions for the performance of primary operations. The limb was promptly amputated in 44.4 per cent. of these gunshot fractures. On the other hand, during the past two years 82 cases of gunshot fracture of the femur were reported, 6 of which were treated by primary amputation and 2 by resection, the remaining 74 cases being treated by conservative methods, not because the conditions were not favorable for the performance of primary operations, but because of a conviction that under present methods of treatment the limb could be preserved without adding materially to the danger to life. The

limb was lost through surgical intervention in only 7.3 per cent. of the cases.

Not only limbs but lives were saved by the surgical practice of the past two years. In the 82 gunshot fractures of the femur the upper third was involved in 32, of which 5 were fatal; the middle third in 27, of which 3 were fatal; and the lower third in 23, of which 1 was fatal. The mortality varied from 4.3 per cent. of the cases in which the lower third was fractured to 15.6 per cent. of the cases in which the upper third was the site of the injury, whereas the corresponding percentages of fatal cases during the Civil War were respectively 42.8 and 49.7. The whole of the lessened mortality in these serious fractures may be credited to the protection given to the wound by the first-aid dressing and to the care exercised in the subsequent aseptic treatment of the fractured limb.

In penetrating wounds of the thorax the rate of mortality fell from 62.6 per cent. during the Civil War to 27.8 per cent. during the years 1898 and 1899. The Civil War reports show 8403 cases in which the results were determined; 5260 deaths occurred among the number. The reports for the later years, as already stated, show 198 cases of which 55 were fatal.

There were during the Civil War 3475 penetrating wounds of the abdomen in which the ultimate results were determined; 3031 of these, or 87.2 per cent. of the total, proved fatal. During the years 1898 and 1899 116 cases, 81 fatal, were recorded, the fatal cases constituting 70 per cent. of the total. Of 10 cases in which laparotomy was performed 9 were fatal.

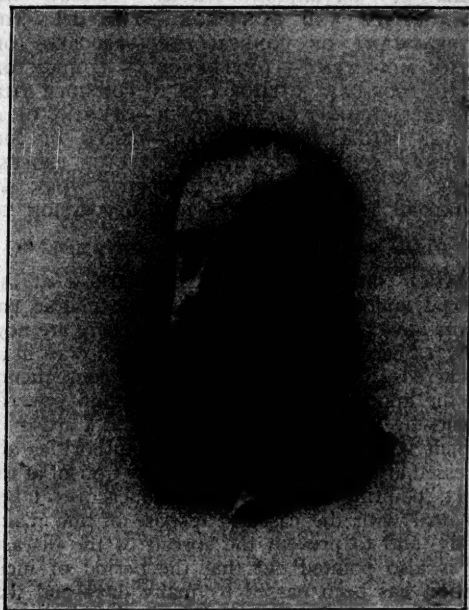
The alteration in the percentages of mortality in fractures of the cranium is less marked than in wounds of other parts of the body. Of 4243 cases of cranial fracture during the Civil War, 2514 or 59.2 per cent. were fatal. In 1898 and 1899 68 cases were recorded with 37 deaths, the latter forming 54.4 per cent. of the whole number.

Suicides in the Army.—Surgeon-General Sternberg has prepared statistics making a comparison of cases of suicide and homicide which occurred in the army during the years of 1898 and 1899 compared with the ten years between 1888 and 1897. It shows that there were relatively fewer homicides during those two years than during the previous decade. The average number of suicides per year in an army of 27,116 for the ten years was 17. The ratio per thousand was .63 per cent. The strength of the army in 1898 is given at 147,795, the average number of suicides 38, and the percentage per thousand .26. The strength of the army in 1899 is given at 105,546, and the number of suicides at 30; ratio per thousand .28 per cent. During the ten years from 1888 to 1897, the homicides are given at 5.5 per cent., and the ratio per thousand .20 per cent. For 1898 the number of homicides at 19, and the ratio per thousand .13 per cent.; for 1899, the number of homicides at 23, and the ratio per thousand .22 per cent.

OBITUARY.

DR. HENRY D. NOYES, M.D.

NEW YORK loses by the death of Dr. Noyes one of its most noted specialists. This city can claim him as one of her own, as he was born here in 1832 and has been connected with medical work in the city ever since his graduation from the College of Physicians and Surgeons in 1855 to the time of his death, which took place at his summer residence in Mount Washington, Mass., November 12th, of pneumonia. After graduation he spent four years on the Continent, where he devoted the major portion of his post-graduate study to the eye and the ear, in which



DR. HENRY D. NOYES, M.D.

branches he has since shown such a marked proficiency.

Dr. Noyes was the type of specialist that medicine is proudest of, thorough and painstaking in all of his work, brilliantly equipped intellectually and possessed of deft operative ability. His teaching was incisive and definite and his students always carried with them some practical information after his lectures. His contributions to the literature of eye disease have been many, and his text-book on "Diseases of the Eye" has been standard for many years.

Dr. Noyes was visiting surgeon to the New York Eye and Ear Infirmary and was a member of the Academy of Medicine, its Ophthalmic Section and the American Ophthalmological Society. His local interests were with the County and State Medical Societies. He was a very busy man, but found time for a number of out-

side interests, and was frequently to be found at the Century Association, of which he was a member, at its noted gatherings. He was also a member of the Nineteenth Century Club, and the New England Society. Dr. Noyes is survived by his widow, two daughters, and one son, the latter a senior at Yale.

CORRESPONDENCE.

OUR LONDON LETTER.

[From Our Special Correspondent.]

LONDON, November 7, 1900.

THE PLAGUE AT GLASGOW AND CARDIFF—ALL DANGER OF EXTENSION PASSED—PLAGUE AT MAURITIUS AND HONG-KONG—THE OPEN-AIR TREATMENT OF CONSUMPTION—PROGRESS OF THE MOVEMENT—CONFERENCE IN LONDON OF THE POOR-LAW AUTHORITIES TO CONSIDER THE ESTABLISHMENT OF SANATORIA—OPENING OF A SANATORIUM FOR LIVERPOOL—DEATH OF SIR HENRY ACLAND, BART., LATE REGIUS PROFESSOR OF MEDICINE AT OXFORD—HIS WORK AT OXFORD UNDER ECCLESIASTICAL OPPOSITION TO SCIENCE.

MUCH satisfaction is felt in Glasgow at the official announcement that 6 of the plague patients have been dismissed cured. There are now only 14 cases in hospital and no fresh ones have occurred since my last letter. In consequence of the apprehension aroused in foreign governments by the fatal case of plague at Cardiff of which I have informed you, the authorities addressed an important letter to every Consul at the port, pointing out the prompt measures taken to deal with the case, to dispose of the man's body, and to prevent the spread of the disease. It is also pointed out that the period of incubation has been passed by many days and that there is no probability of any fresh case occurring. It is thought that the man who died was infected by fleas that lived on rats which were afterward found dead in the vessel on which he sailed. The nurse who attended the man was isolated with him, and after the latter's death was kept isolated. She is now considered so far out of danger that she is nursing ordinary patients.

According to a telegram received at the Colonial Office, 33 fresh cases of plague, of which 26 were fatal, occurred at Mauritius during the week ending October 11th. The total deaths from plague were 32. For the week ending October 15th, 4 cases of plague and 4 deaths occurred in Hong-Kong.

The movement to establish sanatoria for the open-air treatment of phthisis continues to progress. For some months the Board of the large metropolitan districts of Poplar and Stepney has been considering the subject. It is of the opinion that by the proper treatment of the disease in its

early stages much benefit and in some cases cure would result. After a conference with the medical officers and clerks of the Unions of the district a deputation was appointed to wait on the Government authorities—the local Government Board. The latter expressed its sympathy with the desire to provide the accommodation referred to, but objected to individual action in the matter, the question being in the Board's opinion a metropolitan rather than a local one. Adopting this suggestion, a conference of all the Poor-Law authorities in London will be held at St. Martin's Town Hall to consider the question of establishing hospitals for the open-air treatment of consumption. The great northern city of Liverpool is building a sanatorium for the open-air treatment in the forest of Delamere, 500 feet above the sea level. It has been enabled to do this early by reason of the munificence of two of its citizens, who each have given £7500 for the provision of the necessary buildings. The position is an ideal one. It is sheltered from the east winds by a ridge of hills and overlooks a richly-wooded, undulating country toward the Mersey and the still more distant Welsh hills. It will be further improved when the 3000 pine trees, the gift of another citizen, have grown up. They will serve the treble object of beautifying the site, protecting the buildings and giving the air that peculiar hygienic character which is so valued. The foundation stone was laid by Lord Derby who showed such a grasp of the subject that Sir William Banks, the distinguished Liverpool surgeon, paid him the high compliment of saying that his description of tuberculosis and his treatment was such that a professor of medicine might envy. His alliteration of "dust, dirt, and darkness" as the media in which the disease thrives was particularly happy, as was also his statement that by the New Gospel consumption had been transferred from the category of hereditary to infectious diseases and had had its true method of treatment indicated.

The death of Sir Henry Acland, Bart., late Regius Professor of Medicine in the University of Oxford, and the friend of Ruskin, removes a distinguished, highly-cultured physician from the profession. He was descended from an old Saxon family of Devonshire squires and was educated at Harrow and Christ Church, Oxford, taking the Bachelor's degree in the University in 1840. He then proceeded to study medicine in St. George's Hospital where Sir Benjamin Brodie was a surgeon. In 1843 he went to Edinburgh and studied there for a year or two under Dr. Alison. In 1844 he was awarded a gold medal for an essay on "Feigned Insanity," which was considered a valuable contribution to a subject then little known. In 1845 he was appointed to the Lee Readership in Anatomy in the University of Oxford and commenced the formation of an extensive collection of physiological specimens. In 1847 he was appointed physician to the

Radcliffe Infirmary, Oxford, a post which he held for forty years. In 1847 he was elected a Fellow of the Royal Society at the early age of thirty-two. In 1857 he was appointed Regius Professor of Anatomy in the University of Oxford. He then applied himself to the formation of the pathological collection in the museum. His work at Oxford in those days was performed in the face of great obstacles. Natural science was not only almost ignored, but regarded by many religious leaders as tending toward infidelity. The whole spirit of Oxford was classical and ecclesiastical. When it was proposed to set up a new scientific museum there was a cry of dismay and a tempest of opposition. Every vote in convocation was carried only by a narrow majority. The grant for the lighting of the court of the museum was carried, but that for the burners was lost! Describing the condition of medicine in his student days, Sir Henry Acland wrote: "Any place was thought good enough for a medical student. The neglect of him by governments was a proverb. What was the result? A surgeon of note was shown to me as the one man strong enough to carry away a body under each arm from the graveyard for the body-snatchers." Acland as a teacher exerted a wide influence on many generations of students for which, and not for any discoveries or original work, will he be remembered. He infused into his labors a moral earnestness, a dignified devotion and sincerity which were a standing influence of the best kind. One of his most serviceable pieces of work was a memoir on the visitation of cholera in Oxford in 1854. He showed that it was full of the filthiest cesspools, contaminated wells, badly constructed drains, and sewers, and that the narrow streams about the town were befouled by the drains. It was, therefore, an excellent center for an epidemic. Attacks occurred previously in 1832 and 1849, but they were regarded as visitations from God and were never investigated scientifically. His work led to great sanitary reform which afforded a lesson for the whole country. His most important publication was a volume on "National Health," written in 1871. It deals extensively with the essentials of public health as then understood. His "constitutional English serenity in danger" is illustrated by the following story told of him by John Ruskin. At the age of thirty he was wrecked in a steamer on the Dorset coast. The steamer laid wedged in the rocks all night and the dawn broke on half a mile of dangerous surf between the ship and the shore—the officers in anxious debate, the crew in confusion, the passengers in hysterics or at prayers, were all astonished and many were scandalized at the appearance of Dr. Acland from the saloon in punctilious morning dress with the announcement, "Breakfast is ready." To the impatient clamor of indignation with which his unsympathetic conduct was greeted, he replied by pointing out that no boat could go on shore, far less come from it, and that in the meantime, as most of

them were wet and cold and at the best must be dragged ashore through the surf or else swim for their lives, they would be extremely prudent to begin the day as usual with breakfast. The hysterics ceased, the confusion calmed, what wits anybody had became available again, and not a life was ultimately lost. Sir Henry Acland had a long and intimate connection with the Royal Family. He was appointed a member of the Prince of Wales' suite when he visited Canada and the United States in 1860. When the Prince was at Oxford he was appointed his honorary physician.

TRANSACTIONS OF FOREIGN SOCIETIES.

French.

CHOLELITHIASIS — URETHRAL CALCULI — VESICO-VAGINAL FISTULAE — XIPHOPAGUS MONSTER — PLAGUE IN JAPAN — RAW MEAT AND TUBERCULOSIS — TRYPAOSOMES OF RATS — PERIODIC SEXUAL EXCITEMENT IN GENERAL PARALYSIS — CEREBROSPINAL FLUID IN MENINGITIS — BACILLUS TYPHOSIS AND ITS TOXINS — TUBERCULOSIS IN TUNIS — BACILLUS DIPHTHERIAE AND AGGLUTINATION — PECULIAR FORMS OF VARICELLA — TYPHOID PLEURISY — TYPHOID PULMONARY INFARCT.

LEJARS at the Société de Chirurgie de Paris, October 3, 1900, in behalf of Sierra (Santiago de Chili) described the latter's method of dealing with cholelithiasis. First, a cholecystectomy is done, the necessity for which in the opinion of the speaker is not always indisputable; second, a choledochotomy is performed followed by exploration and suture of the canal and finally free drainage of the abdominal wound for forty-eight hours. The cases which the speaker had observed were all successful. The treatment of the duct appeared to secure validity of the sutures which so often part after insertion.

MICHAUX said that the procedure was common in his hands. Usually he first lifted up the duct to empty its septic contents into the bladder before removing the latter.

ROUTIER added that cholecystotomy and washing is the best first step, because the bladder *in situ* is an excellent tractor for managing the duct during the exploration of it.

SCHWARTZ claimed that more prolonged drainage than for forty-eight hours is necessary to provide against death by giving way of the sutures and consequent leakage.

GUINARD in behalf of Fluyette (Marseilles) reported two cases of calculi of the urethra. The first patient, twenty years old, had developed a para-urethral stone in a diverticulum of the urethra during the past fourteen years. The second patient was forty-five years of age and suffered from an intra-urethral calculus which weighed sixteen grams and had reached considerable age.

RICARD at the meeting of October 10th described his method of cure of an obstinate case of vesicovaginal fistula, which had been subjected to several operations previously, the last being an occlusion of the vulva. This was followed by a highly annoying and painful cystitis, for the relief of which she came under his care. His first step was a wide denudation of the anterior face of the uterus, precisely as in the first stage of a vaginal hysterectomy. The uterus was then drawn far down and in this free space and with this thorough freshening of the edges the fistula was closed by suture and almost complete healing ensued. A minute fistula persisted which was easily closed at a second sitting.

ROUTIER reviewed another case where there was too little tissue in the anterior vaginal wall for suture until the uterus was still further freed and drawn down. Cure in this case, previously considered beyond the reach of all surgery, was absolute.

BAZY condemned in unequivocal terms occlusion of the vulva and vagina in these cases.

WALTHER reported success by this method in an instance in which hypogastric laparotomy had failed.

SEGOUD recalled a patient upon whom he had done an exploratory subpubic cystotomy and discovered one of the urethral orifices in one of the margins of the vesical part of the fistula. In suturing this sinus he was most careful not to have the silk pierce the walls and form the nidus of a calculus and not to include the urethral mouth in the scar-line. A minute sinus persisted which was promptly closed after the manner described by Ricard.

POTHERAT contributed another case of urethral calculi. His was a phosphatic deposit about an oxalate of calcium center and found in a pocket of the canal. It was removed by external urethrotomy after having given symptoms simulating stricture for eight or ten years.

CHAPOT-PREVOST (Rio de Janeiro) at the Académie de Médecine, October 2d, introduced one member of a xiphopagus monster subsequent to surgical separation. Both individuals were females. The other perished a few days after the interference apparently of a pleuro-pericarditis. In addition to the soft external parts and the bones which united the girls there was a large bridge of hepatic tissue and of pericardial sac, with a small canal connecting the two pericardial cavities. This seems to be the first case recorded where when the liver was involved the separation has not been fatal.

VALLIN gave the report of Kitasato (Tokio, Japan) of two epidemics of the plague in the villages of Kobé and Osaka, comprising 69 sick and 63 deaths. The rats appear to have been the greatest single factor in the spread of the disease. The plague extended among the populace from November 18, 1899, to January 11, 1900. Up to the end of January 20,000 rats in Kobé and 15,000 rats in Osaka were found dead

of the disease. The specific germ was found positively once in five examinations at Kobé and once in ten examinations at Osaka and very often many dead rats were found either in the same house or in the immediate neighborhood of the sick.

SALMON at the Société de Biologie, October 6th, rehearsed his results in his endeavor to prove the observations of Richet and Héricourt that raw meat is curative of tuberculosis among dogs. He divided his animals into three sets. To the first series he fed raw meat for a long time before the inoculation which proved fatal to all. To the second set the meat was given twenty days after the injections. Several gained in weight and survived a long time. The last series of dogs were allowed to become emaciated and cachectic before the raw meat-feeding was initiated. No effect whatever was observable among them. It is interesting to note that one animal suffering from tuberculous peritonitis was seemingly cured by the raw beef; but the autopsy revealed very numerous active young tubercles.

BOUCHARD said that thus far in the hands of numerous observers raw meat is of absolutely no value or of merely insignificant value, in tuberculosis among human beings. The successes reported for this method among dogs tend to show that their economy possesses a relation to raw meat which that of human beings does not.

LAVERAN has determined that the trypanosomes of the rat may be preserved alive for thirty to forty-five days by placing the blood containing them on ice. This fact is of value to those who have not previously found it possible to study them alive and their effects when they are injected into animals.

FERE reported the case of a man afflicted with a life-long general paralysis exhibiting a sexual excitement with the same periodicity after the first appearance of his disease.

WIDAL, at the meeting of October 13th, reviewed the observations of Sicard, Ravaut and himself upon the characters of the cephalorachidian fluid in tuberculous meningitis. As a rule no definite cells appear except when the meninges have been attacked by acute inflammation and then these vary in accordance with the nature of the excitant. In the tuberculous patients the fluid was at times turbid, or bloody, or so limpid as to simulate closely normal fluid. Microscopically, after centrifuging, there appeared a large number of lymphocytes, but exceptionally any polynuclear cells. On the other hand in cerebrospinal meningitis the latter cells were largely predominant. The conclusion is that possibly a diagnosis can be indicated by a microscopical examination of the fluid obtained by lumbar puncture.

BACALOGU presented a report of a series of experiments upon guinea-pigs with the bacillus typhosus. Living cultures were injected into the pericardium and after three or four days always they set up a pericarditis followed by myocar-

ditis and left-sided hemorrhagic or serous pleurisy. The same results were obtained by using inoculations of the bacilli killed by boiling. Other animals received doses of bouillon culture filtered through porcelain. No lesions were found in these. From these results he infers that the typhoid toxin resides in the bacillus and is not soluble in media as is the poison of the bacillus diphtheriae.

REMLINGER remarked upon the very pronounced rarity of all forms of tuberculosis in Tunis alike among the Europeans and the Jews, less so among the Arabs, so far as pulmonary forms go. He advanced the theory that the situation of the county, between the sea and the Sahara desert, involves a ventilation from north to south.

BOUCHARD attributed to unhygienic life and surroundings the greater frequency of tuberculosis of the lungs among the Arabs.

NICOLAS (Lyons) submitted a note in which he stated that agglutination, at first absent, will appear among the bacilli of Loeffler after a long period of laboratory culture.

PIERRE MERKLEN at the Société Médicale des Hopitaux, October 12th, submitted a minute of his observations of an epidemic of varicella in one family presenting peculiarities worthy of mention. The illness began with an eruption upon the trunk, so distinctly that just as soon as the vesicular lesions appeared on the face a fever was present, the vesicles of the chest and back were already drying up or actually casting off their scabs. Since the preliminary trunk eruption was almost entirely latent at its invasion and the contagiousness of the disease was precocious, the futility of any isolation precautions in the family would be at once apparent. In one of the four cases the vesicles remained citrine, there was no fever, the eruption was confined to the trunk and appeared only discretely upon the face and the extremities and desiccation and exfoliation occurred without scars. In the three other patients the vesicles of the face, hands and feet suppurred after three or four days of irregular and continued fever, dried very slowly and the crusts when cast off left behind distinct scars. One might distinguish, on the basis of these four cases, a variety of varicella with citrine vesicles, without fever and without scars and a variety with suppurating eruption, some fever and scars. Finally, it appeared that other preexisting skin lesions (eczema, excoriations of hands and feet and fleabites) contribute greatly to the abundance and character of the eruption. The causes of supuration of the lesions are without doubt complex. All his patients were surrounded by the best conditions of hygiene, but an existing eczema certainly was a favoring factor of suppuration in the skin; so likewise the second who had an abrasion of the foot. The third, however, had an intact skin and the only reason why it became infected seems to be that a varicella once

suppurating may transmit itself in that form, probably by mixed infection of the germs of varicella and of suppuration associated.

SIREDAY reported a case of typhoid fever in a man twenty-seven years old, the invasion and early course of which were usual until the twenty-first day when signs of involvement of the pleural cavity appeared. The needle withdrew a few drops of pus which contained numerous bacilli typhosi and a few rare pneumococci. A few days later several other punctures were made without definite result. The patient went on to complete recovery. This case deserves to be added to others of typhoid pleurisy, as described by Widal, who taught that the exudate is usually so scanty as not to warrant thoracentesis, although the physical signs may indicate quite a copious accumulation. This is due doubtless to the accompanying inflammation of the lungs which clouds the picture.

GAILLARD presented the history of two typhoid cases with pulmonary infarct. The first patient was a twenty-four-year-old man who on the nineteenth day of his disease was overtaken by a sudden pain in his side, followed by a bloody expectoration but without temperature. A few days later there appeared at the base of the right lung signs of a slight pleuritic exudate, which soon absorbed, but left behind distinct adhesions. The second observation was upon a man twenty-one years old who on the twenty-first day had a similar attack with slight hemoptysis, dulness, subcrepitant râles and loss of respiratory murmur at the base of the left lung. These signs ameliorated and then pleurisy appeared with fever. Recovery followed. Exploratory puncture was negative in each of these cases, perhaps because the fluid was too thick or because it formed so thin a layer on the surface of the lung that the needle pierced the substance of that organ.

SPECIAL ARTICLE.

PLAGUE IN SAN FRANCISCO DURING OCTOBER, 1900.

SAN FRANCISCO, QUARANTINE STATION,
Angel Island, Cal., October 29, 1900.

SIR: In reply to Bureau letter of the 20th instant (C. H. W.), and in confirmation of telegram sent on the 27th, I have the honor to state that during the month of October 3 cases of plague have occurred in San Francisco among the Chinese. All cases terminated fatally. The first death occurred on October 5th, at 720½ Dupont Street. The patient was a cigar-maker, who had been working just previous to his last illness in a cigar factory on Battery Street. The history which was obtained from the acquaintances of the man was that he had been ill about four or five days before death. No clinical history of his illness could be obtained. The post-

mortem examination was limited to the removal of the enlarged femoral glands, which, on examination, both microscopically and bacteriologically, showed the plague bacillus. The bacteriologist of the city board of health submitted some of the gland tissues to me for an examination. This was examined in the laboratory at this station, with the result of confirming the diagnosis.

The second death occurred on October 10th at 767 Clay Street, in the same house whence a case of plague was removed to the city hospital, dying there on July 5th. This man had been ill for a week or more, and was treated by a white physician. The death certificate gave the cause of death "typhoid pneumonia." Dr. Kellogg informs me that on inspecting the body a mass of enlarged femoral glands was seen, which, on removal, showed evidences of acute infection. Microscopical and bacteriological examination demonstrated the cause of death to be plague.

On October 14th, at request of Dr. O'Brien, the Health Officer, I visited a case at 905 Clay Street, which was reported to present certain suspicious symptoms. This case gave a history of being ill for three and one-half days. The attack commenced with a rigor, followed by fever, giddiness, nausea, and vomiting. He was seen on the evening of the 13th by a white physician, who stated that his temperature was considerably over 100° F., pulse very rapid and weak. There was also nausea, vomiting, and slight diarrhea. On the following morning—the 14th—a considerable swelling of the glands in the femoral regions was observed. There was considerable elevation of temperature, and more prostration than existed the day previous. He then reported the matter to the health office as being probably a case of bubonic plague. The patient was seen about 5 o'clock on the same day by several physicians, *viz.*, Drs. Bulkley and O'Brien, of the health board; Dr. Bunnell, police surgeon; Dr. Ryfkogel, bacteriologist to the State board of health, Dr. Lumsden, myself, and Dr. Pillsbury. The patient presented the appearance of one profoundly ill with an acute infectious disease. His temperature was 103.5° F., pulse 140, soft and compressible. There was considerable delirium. Physical examination revealed an enlarged spleen and a mass of enlarged glands in the left femoral region. There were also several reddish spots over the chest and abdomen, having all the appearances of subcutaneous hemorrhages. Cover-slip preparations were made from the blood, and also of the fluid aspirated from the gland. Cultivations were also made from the gland and blood. Microscopic examination of the cover-slips demonstrated the presence of numerous diplobacilli, which morphologically resembled those of bubonic plague. These bacilli took on a bipolar stain with thionine, and were easily decolorized by Gram's method. The cover-slips made from the fluid removed from the gland contained countless numbers of these bacilli. In fact, it appeared more like that of a

pure culture of plague than a specimen taken from the body. The patient died at 11 o'clock that night, and on the following day Dr. Kellogg, the bacteriologist, made a post-mortem examination, removing the spleen and mass of enlarged glands. These tissues on examination gave the typical appearances of plague infection.

On the following day, the 16th, colonies had developed in the tubes inoculated from the blood and gland. These were examined and found to be those of bubonic plague. Animal inoculations made from these cultures were in every way confirmatory.

The State board of health has limited its operations to simply observing what is being done in San Francisco. They have instructed their bacteriologist, Dr. Ryfkogel, to be present at all post-mortem examinations and make an independent investigation. All sanitary inspectors, who were for a time employed by the various members of the board of health at the instance of the Governor, have been discharged. Dr. Crowley, a member of the State board of health, stated to me on the 27th instant that the State board of health was of the opinion that for the time being the city board of health was able and ample to meet the requirements of the situation; that while there had been bacteriological evidence of the existence of bubonic plague, there were not sufficient clinical data to warrant any steps to be taken.

In conclusion, I would state that it is my belief that the area of infection is gradually growing wider, so that now there are only three blocks of the Chinese quarter proper in which there has not occurred, since March last, a case of plague. The conditions which will obtain in the next six months will be, in my opinion, conducive to a further outbreak. The Chinese population will, in a few weeks, be augmented by several thousand more than exists during the summer months. About 3000 Chinese return every fall from the salmon canneries of Alaska. Then at the end of the fruit-picking season, which now is rapidly drawing to a close, large numbers of Chinese who are thus engaged seek a temporary home in San Francisco during the winter months. These people to all intents and purposes are contract laborers, and are of the lowest coolie class. They live under the worst hygienic conditions imaginable. It would, therefore, not surprise me to see a number of cases of plague occurring among this class of people. I will transmit, as soon as obtainable, a map showing the infected area, as well as the number of cases which have already occurred. Respectfully,

J. J. KINYOUN,
Surgeon, U. S. M. H. S.

Public Health Reports.

Typhoid at Ithaca.—A number of cases of typhoid fever have developed in Ithaca the past week. A considerable proportion are students of Cornell University residing on the campus.

SOCIETY PROCEEDINGS.**NEW YORK ACADEMY OF MEDICINE.**

Stated Meeting, Held November 1, 1900.

The President, William H. Thomson, M.D., in the Chair.

Cystitis and Bacteria.—Dr. William K. Otis read a paper on the etiology of cystitis. He said that it is now generally conceded that the cause of cystitis is some microbe. This was in fact one of the first diseases the microbic origin of which was demonstrated. Pasteur showed in 1858 that even in normal individuals the micrococcus ureæ might exist in the bladder and so alter the urine as to make it alkaline. He taught that this micro-organism might easily be introduced into the bladder from without and in 1864 suggested the sterilization of urethral instruments. In 1883 Guyon of Paris produced experimental cystitis by the injection of the micrococcus ureæ into the bladder. The microbe did not produce its pathological effect in the healthy bladder, but when congestion was brought on by tying the urethra of an animal cystitis always followed. At first this was thought to be the only microbe that caused cystitis, but soon many others were found to bear an etiological relation to the condition. Now it is known that there are some twenty microbes concerned in the causation of the disease. The most common of these is the bacterium coli commune.

Cystitis and Bacterium Coli.—The exact relation which this micro-organism bears to cystitis is as yet unknown. It is well known that it occurs normally in the human intestine. It exists under many different forms and has at various times borne a number of different names. In 50 cases of cystitis it occurred 47 times. In 25 cases of cystitis it was found 23 times. It is evidently the most important of the causative bacteria, yet it is well known that its presence alone is not sufficient to set up an inflammation of the bladder. A number of cases of bacteriuria have been reported in recent years in which, though the bacterium coli commune occurred in large numbers in cloudy, offensive urine, practically no inflammatory symptoms existed in the bladder.

Other Bacteria and Cystitis.—After the bacterium coli commune the most important microbes in cystitis are the three forms of staphylococci, especially the staphylococcus aureus, the streptococcus, a bacillus septicus that is found occasionally, the gonococcus, and the tubercle bacillus. The gonococcus does not as a rule prove to be a virulent micro-organism for the bladder. When symptoms of cystitis occur during an attack of gonorrhea it is because of secondary infection. The tubercle bacillus very seldom affects the bladder primarily.

Avenue of Infection.—The avenue by which infectious agents find their way into the bladder

is not always easy to determine. The most frequent source is the urethra. They are either carried back on instruments, or they may occasionally find their way from the posterior urethra, or from a collection of pus behind a stricture. Oozing urine may prove a medium for the introduction of microbes into the bladder. When incontinence exists and the urine dribbles, drop by drop, the column of fluid is almost stationary in the urethra for some time. The bacterium coli may then find its way into the bladder, as it possesses good motility. The neighborhood of the anus and the ease with which these germs might be carried by the hand to the meatus makes this method of infection not unlikely.

Infection from the Blood.—An inflammatory process in any organ may give rise to metastases in the urinary tract. Usually the starting-point of such a metastatic condition is in the intestines. It has been proven experimentally that when a ligature is placed on the intestines of an animal, bacteria may get into the abdominal circulation and so find their way to the bladder. The bacterium coli commune is especially prone to do this. The infectious agent may come from an abscess in a neighboring organ, or may spread directly from the uterus or the rectum. It seems clear that bacteria occur not infrequently in the human circulation. They are eliminated by the kidneys and so find their way into the bladder, but usually without producing any inflammatory reaction. Some predisposition usually must exist before the bacteria can gain a foothold for their reproduction and development. The colon bacillus, especially, may find its way into the bladder without producing any cystitis. Guyon has had a patient who for thirty years has been passing the bacterium coli from his bladder, yet has not suffered from any vesical inflammation. Dr. Otis himself has had a case under observation for several years in which there is the offensive, stale odor so characteristic of the presence of the bacterium coli and in which these bacteria actually exist in very large numbers, yet there are no actual symptoms of cystitis.

Rovsing, an authority on cystitis, was so much struck by these facts that he considered the bacterium coli commune as a harmless inhabitant of the bladder, as it is in most cases of the intestines, and thinks that there is always some other micro-organism present which is the active agent in the production of the inflammatory symptoms. The luxuriant growth of the bacterium coli, he thinks, interferes with the demonstration of the presence of the other microbe. Tuberculous foci in either or both kidneys may exist for years and pour any number of tubercle bacilli into the bladder and yet no infection take place. The tuberculous process may spread from kidney to bladder by the ureter, or it may be the result of an abscess of the prostate rupturing into the bladder, or finding its way along the ducts to the urethra and thence into the bladder. The presence of a simple cystitis predisposes to

tuberculous cystitis. It is only when the vital resistance of the bladder is thus diminished that infection takes place. The presence of a foreign body, the congestion and trauma incident to retention of urine, may easily predispose to almost any form of bacterial cystitis. Guyon has shown experimentally that artificial retention is the surest method of arousing cystitis if pathogenic microbes are present. Hence there is the greatest necessity for scrupulous asepsis in the treatment of retention of urine by instruments or otherwise.

Gouty and Rheumatic Cystitis.—It was the custom to refer a good many cases of cystitis to the underlying constitutional condition that exists in gout or rheumatism. It is doubtful if they ever more than predispose the organ to infection. Cold was supposed to be another prominent factor in the etiology of cystitis. There are times when exposure to cold seems to be the reason for an exacerbation of an already existing cystitis, but it probably never causes an attack of the affection by itself. There are, of course, certain mechanical conditions, as the presence of a foreign body or certain irritants, as cantharides, turpentine and the like, which may cause vesical inflammation.

Prophylaxis.—The most important prophylactic measure is the thorough sterilization of instruments that are used in the urethra. Steel instruments, of course, can be readily and effectively cleaned by passing them through the flame of a Bunsen burner. Soft rubber catheters can be absolutely sterilized by boiling. They should then be kept in a one-to-two-thousand solution of formalin or of sublimate until they are used. Silk and other catheters are not so easily cleansed. These should be washed well on the outside with warm soap-suds and on the inside by forcing a stream of suds through their caliber with a syringe. Guyon recommends dry heat and says that they can be effectually sterilized at 140° C. without producing any change in their texture. Boiling in plain water for five minutes has also been recommended. When this is done the catheters must each be wrapped separately in gauze, because if they lie in contact with one another adhesions take place during heating and the surfaces become roughened. Formalin vapor may also be used for the sterilization of these catheters and various apparatus are manufactured for this purpose. If formalin is employed the catheters should be washed out thoroughly after their exposure to the vapor, otherwise this substance will prove irritating to the urethra.

Directions to Patients.—When patients are to use the catheter themselves they should be given the most explicit directions as to the care that must be exercised in keeping the catheters aseptic. It is impossible to insist too much on this point, for, no matter how intelligent patients may be, the use of the catheter becomes in time a routine and serious neglect of precautions ensues. Even physicians become careless and do

not take the necessary care in this matter. Martin's directions are the best. They may seem to the inexperienced needlessly detailed, but those who realize how serious vesical infection may prove will consider them justified by the conditions. The patient should have twice as many catheters as he needs to use in the twenty-four hours, and on alternate days his catheters should be thoroughly subjected to some assured method of sterilization. There is no use in attempting to limit the number of catheterizations. As a rule, the urine must be removed from the bladder often enough to prevent an uncomfortable collection of the fluid and also to avoid congestion. The presence of large amounts of urine so lowers the vital resistance of the bladder-walls that infection very easily takes place.

Lubricants.—A good lubricant is needed and should be in the form of some material that does not prove a ready culture medium for microorganisms. The lubricant substance should also be soluble in water, otherwise a collection of material may cling to the bladder-walls. There is at least one case on record where a large amount of vaseline was found in the bladder as the result of its frequent and abundant use for the lubrication of catheters. Sterile glycerine possesses many of the qualities of a good lubricant, but is too thin. Lubrichondrin has been recently introduced to the profession and is in many ways an ideal lubricant. It is sterile and is sold in tubes which assures its cleanliness much better than if it were in some ordinary receptacle. After the passage of a catheter the bladder should be washed out with a one-to-two-thousand formalin solution, or a dilute solution of nitrate of silver should be injected into the bladder and allowed to remain for three or four minutes. After this the bladder should be washed out. Various internal remedies which act as antiseptics in the urine are in general use and will often be found of assistance in the treatment of vesical conditions. Of these salol, methylene blue, and benzol are the best. Recently there has been introduced a new synthetic product, urotropin, which gives excellent satisfaction. In doses of seven and one-half grains given four times a day, this drug will often clear up cloudy urine that has resisted even the employment of vesical irrigation.

Predisposition Important.—In the discussion Dr. Edward L. Keyes said that bacteria are undoubtedly of importance in the production of cystitis, but some underlying condition of the system seems to be still more important in the etiology. He has frequently seen the condition known as bacteriuria, *i. e.*, hazy urine with a distinct mousy smell, accompanied by but very slight symptoms of vesical irritation. A few pus cells could be found in the urine, the haziness of it could not be thrown down by chemical reagents and the bacteria could be readily detected by culture methods. If the bacterium coli is pathogenic for cystitis it is evident that there

are conditions under which it fails completely of its effect. Not only this, but under certain circumstances, even when the bladder reacts distinctly to the irritant present, the general system does not seem to suffer and the individual remains in reasonably good health. Dr. Keyes has under observation at the present time a man whom he saw first twenty-five years ago. At that time the urine was putrid and the man was living an absolute catheter life. After a course of irrigation the condition improved; then the patient neglected himself and the conditions became worse than ever. A few years ago he saw the man again and found that he complained very little of vesical symptoms. He was still passing the catheter faithfully every day and the instrument was a sight. The catheter was all blistered and reminded one of nothing so much as of a rat-tail file. The patient employed no lubricant. The instrument was kept in a drawer in his office, or in a washstand at home, and no precautions as to cleanliness were taken. Not long ago the man was placed on urotropin and since then his urine has been perfectly clear.

Bacterial Infection.—Of late years it is becoming recognized that the mere presence of pathogenic microbes is not enough to produce disease. It is the old question of the seed and the soil. Only when the soil is capable of nourishing the plant will the seed grow. Long ago in the Good Book it was said that some seeds fell on good ground. Soil is more important than seed. When the tissues are rendered less resistant by sexual excesses, or by long sexual restraint, the incident congestion decreases the vital resistance and so makes favorable soil for the implantation of bacteria. At such times instrumentation or trauma may easily give rise to cystitis. The relation which predisposition bears to infection has been beautifully demonstrated by some experiments of Albarran. He injected into the circulation of an animal certain bacteria that had been isolated from a case of septic nephritis. These bacteria failed to produce anything but a local reaction, though some of them were found in the urine. When one of the kidneys of the animal, however, was deliberately bruised at the time of the injection, the bacteria found a lodgment in the kidney and produced a purulent condition. The uninjured kidney remained normal, though the bacteria in the circulation had also been carried to it.

Catheter Life.—At the beginning of catheter life patients are usually very sensitive to irritations of their urethra and bladder. Nature has not yet built up the protective mechanism which later so often effectually secures these patients against the effects of irritation and of infection. Even when all the details of asepsis are scrupulously put into practice, most patients will suffer from irritation and present hazy urine containing scattered leucocytes. Later many patients will be capable of standing almost anything in the way of urethral and bladder irritation.

Individual Vulnerability.—Dr. Bolton Bangs said that the occurrence of cystitis depends to a great extent on individual susceptibility. A patient of Dr. Bangs suffered so severely from cystitis that it was thought necessary to put in a retention catheter. The patient had to get up to the commode and the catheter slipped into the vessel. It was taken out by the patient himself and after simple wiping reinserted. An acute exacerbation of the cystitis resulted, but the symptoms subsided in a few days. It is not an unusual thing to find that old men who are living a catheter life carry the instrument in their hats. Yet such men often live to eighty and then do not die because of their bladder affection. The simpler the directions given to patients for the cleansing of catheters the better. Boiling constitutes the best and easiest means of sterilization. The importance of a good sterile lubricant cannot be overestimated. Dr. Bangs considers lubrichondrin the best now to be had. It is extremely important to maintain the general health of patients who are living a catheter life.

Catheter Hats.—Dr. Keyes said that it is a well-known fact that one of the prominent haters on Broadway years ago made a special hat for old men in the bottom of which was a compartment in which a catheter could be placed.

Failure of Tolerance.—Dr. Eugene Fuller said that the cases which grow so very tolerant to catheterization are the exception and not the rule. They come as such a surprise that they were apt to be remembered. Dr. Fuller considers that cystitis is very frequently the result of a mixed infection. The gonococcus alone, for instance, very seldom produces cystitis. When some other bacterium, also pathogenic in its effect, is present in the bladder at the same time, the two may cause serious inflammatory symptoms.

Cleanliness.—Dr. A. B. Johnson insisted that certain simple precautions as to cleanliness often prove of great service in preventing the occurrence of cystitis. Patients should not only be instructed to boil the instruments they use, but should be made to wash the hands carefully and to wash off the glans penis and the meatus very thoroughly before the insertion of the instrument. In addition to these instructions they should be provided with tubes of lubrichondrin. The most important thing after instrumentation is to wash out the bladder. Utmann of Vienna took very few precautions with his instruments, in fact always used the same sound even for successive patients without sterilization and yet never produced cystitis. He was very careful, however, to wash out the bladder thoroughly after the use of the instrument.

Irrigation of Urethra.—Dr. Valentine said that the urethra is constantly full of pathogenic germs. The danger of carrying these back into the bladder can be minimized by irrigation of the anterior urethra before the passage of the catheter into the bladder. If the irrigation is done with boric-acid solution and the urethra then

filled with an iodoform-glycerine solution, there is very little danger of setting up inflammatory reaction either in the urethra or in the bladder. The importance of clean catheters is emphasized by the recent reports of five cases of vesical calculus, the nucleus of the stone in each case being a hair that was carried in on a catheter.

Vulnerability.—Dr. Jacobi said that the question of infection depends to a great extent on the vulnerability. This may vary from time to time even in the same individual. There are times when the bacterium coli becomes pathogenic even in the intestines. Normally, however, it exists there in millions without doing any harm. Why then should it not occasionally exist in the healthy bladder without producing cystitis? This would not preclude the possibility of its producing cystitis under more favorable conditions. The opportunity for this micro-organism to find its way into the bladder by direct contact is comparatively easy in the female, from the anus into the vagina. There is no doubt that at times broncho-pneumonia is caused by the bacterium coli which finds its way into the mouth and respiratory passages from soiled fingers. Ordinarily its presence does not produce any pathological conditions, but if catarrh of the respiratory passages already exists it may easily cause further pathological developments in the respiratory tracts. The same thing is true in the gall-bladder into which bacterium coli finds its way, but proves pathogenic only when the resistive vitality of the gall-bladder is lowered or the virulence of the micro-organism itself has been increased by some enteric condition.

In closing the discussion Dr. Otis said that at the initiation of catheter life very great precautions should be insisted on. For several days beforehand urotropin should be administered in order to make the urine aseptic and unirritating. Just before catheter life is begun the patient should even be counseled to pass a day or two in bed until he becomes accustomed to the new conditions. Gentleness in the passage of instruments and cleanliness remain the most necessary imperative precautions.

BOOK REVIEW.

An Inquiry into the Conditions relating to the Water Supply of the City of New York. By the Merchants' Association of New York. August, 1900.

It is a pleasure in this day and generation, when universal egoism threatens to stamp out ethical standards and altruistic endeavors, to find a group of citizens, who at great personal expenditure of time, energy and money, are willing to give their best efforts to the public welfare in the battle with political greed and robbery.

The present volume of 627 pages presents a complete review of the water problems of a great city and also exposes the many ramifications of the Ramapo Water Scheme.

The technical economic and engineering features of the problems involved are adequately discussed and the book is well worthy of a wide reading by financier, engineer and tax-payer. To the Merchants' Association should be accorded the thanks of the citizen and the support of the profession.

BOOKS RECEIVED.

- HEART DISEASE IN CHILDHOOD AND YOUTH.** By Dr. C. W. Chapman. Demi 8vo., 101 pages. Illustrated. The Medical Publishing Company, Limited, London. Ninety cents.
- A PRACTICAL TREATISE ON GENITO-URINARY AND VENEREAL DISEASES AND SYPHILIS.** By Dr. Robert W. Taylor. Second Edition. 8vo., 722 pages. Illustrated. Lea Brothers & Co., New York and Philadelphia.
- HERNIA, ITS ETIOLOGY, SYMPTOMS AND TREATMENT.** By Dr. W. McAdam Eccles. 8vo., 231 pages. Illustrated. William Wood & Company, New York.
- TWENTIETH CENTURY PRACTICE.** An International Encyclopedia of Modern Medical Science. Edited by Dr. Thomas L. Stedman. Vol. 20. Tuberculosis, Yellow Fever and Miscellaneous. 8vo., 906 pages. Illustrated. William Wood & Company, New York.
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